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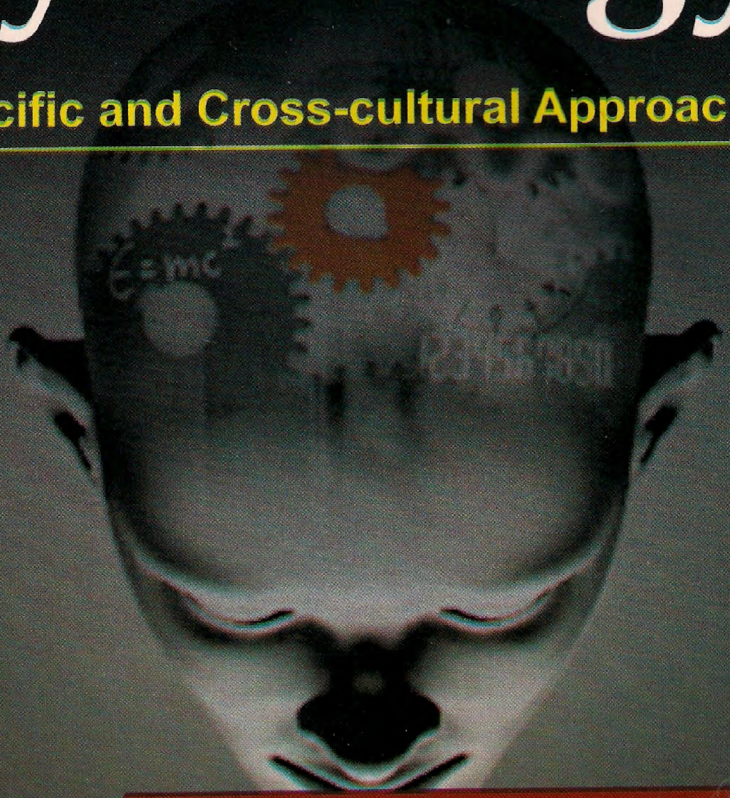
New Vishal's

Applied Psychology

India-specific and Cross-cultural Approaches



Smarak Swain, IRS

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Acknowledgement

Writing a book is a task that involves a great deal of cognitive energy and behavioural discipline. But of utmost importance, especially in the case of a work of non-fiction meant for academic purpose, is the kind of support one gets from social and environmental variables. This book is no different.

First and foremost, I would like to thank the staff members of three libraries that I had frequently accessed in the course of writing this book: Indian Council of Social Science Research (ICSSR) library, Jawaharlal Nehru University (JNU) Central Library, and Delhi University (DU) Central Reference Library. Besides these, I am also grateful to the staff at Ranchi University central library for their support.

Staying focussed and not giving up when aspiring to meticulously write a book is a challenge. My friends **Amit Anand, Rajiv Ranjan Singh, Dheeraj Kumar** and **Parthiban Palanisamy** have boosted my morale in every step while I wrote this book. I have got significant inputs with regards to the material and presentation from friends **Rupesh Agrawal, Ekta Khatwani** and **Dr. Vijay Tadia**.

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Most of the editing work of the book was done while I was undergoing my training at National Academy of Direct Taxes (**NADT**), Nagpur. I got significant support from some of my IRS colleagues in readying the book **-Puneetinder Walia**, who designed the cover page; **Sridhar Dora**, who lent me his laptop so that I could comfortably do my proof-reading; **S. Sundar Rajan**, who made significant suggestions regarding the final presentation of the book.

Finally, I am greatly indebted to my publishers at New Vishal Publications (NVP), **Mithilesh Oberoi** and **Mridul Oberoi** for bearing with my impatience and getting the book published in the present form.

This is a book directed towards students of competitive exams, especially the Civil Service Exam conducted by Union Public Service Commission (UPSC) for recruitment into IAS, IPS, IRS, and other services. Hence, it is made more in the format of notes rather than in the form of scholarly discussion. However, I have detailed the sources I have referred to in the reference section.

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PREFACE

When I had started preparing for civil services, I had taken mathematics and physics as my options. I had, in fact, given my preliminary examination with mathematics as an optional. But owing to various reasons, I decided to take psychology and sociology as my options for mains. Now, being a student from engineering background, I was new to psychology as a subject. And I had extremely less time between prelims and mains. On top of that, I experienced great difficulty in obtaining good source materials on paper 2. This was because paper 2 was about applications and issues. The topics are contemporary and a single source covering most of the topics wasn't available. Besides, this paper deals with a wide array of issues. So to deal with the problem, I relied heavily on scholarly books and journal articles I got access to in various libraries of Delhi. I also got involved in meticulous note-making. By the time I got my result (I had got 196th rank on the merit list), I had very solid notes on psychology paper 2. With encouragement from friends, I finally decided to rewrite my notes in book form with additional material.

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Now some suggestion about how to use this book. Please remember that as the name suggests, Applied Psychology is an advanced level course in most universities. To understand the contents in this book, a basic prerequisite is to know the basics of psychology. For civil service aspirants, a thorough grasp of paper 1 is a must before reading this book. Reading this book without proper grasp of basic psychology can be dangerous, as it may lead to learning of incorrect concepts which you will later have to unlearn. Hence, i suggest that you read it only after having a grasp over paper 1 syllabus of psychology. Also, it will be better to read the chapters in the order mentioned in the contents of this book. This is because, some chapters (such as gender psychology, rehabilitation psychology, military psychology etc) are better understood after reading chapters such as organizational psychology and psychological well-being.

Applied psychology is a vast and contemporary field. Hence, this book can never claim to be extensive enough to be a single exhaustive source. At the same time, you readers are the best judge of what this book lacks and how it could be improved further. I invite your kind suggestions and feedback on the book.

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Psychological Well-being and Mental Disorders

- The concept of Health and ill-health
- Well-being : The concept
- Factors affecting Positive Health
- Factors affecting Subjective Well-being
- Happiness Disposition
- Lifestyle and Health
- Normality and Abnormality
- Causal factors in Mental Disorders
  - Schizophrenia and delusional disorders
  - Mood disorders
  - Anxiety disorders
  - Personality disorders
  - Substance-Abuse disorder

The Concept of Health

It is tough to define health, as it is not a single concept. Rather health refers to a philosophical construct which has been variously inferred by various schools of study. When the term health originated, it was associated with both physiological functioning and mental and moral soundness as well as spiritual salvation. These were, of course, only philosophical theories of health. Many supernatural phenomena were attached to health. In few cultures, health was a divine responsibility and ill-health a supernatural phenomena where the forces of darkness has taken over man.

With advances in scientific fields of medicine, psychology, science and sociology, these philosophical theories have given way to more scientific ideas. Yet, health is but a collection of ideas rather than an integrated idea. This is because the concept of health varies from culture to culture. Also, individuals differ in their ideas of health ! The only agreement is that as a concept, health is multi-dimensional and subjective in nature. An individual may suffer from physical disability and yet be healthy. Another individual with no medical disorder may not be.

Here, we will understand the concept of health, positive health and ill-health as they have evolved in modern western psychology. Beyond this, we will also investigate into notion of health in Indian culture. These ideas can be dealt under the following heads :

1. Traditional medical concept
2. WHO concept of health
3. Ecological concept of health
4. Positive Psychology Movement
5. Concepts of health in Yogic Psychology

The traditional medical concept of health is the earliest scientific notion of health. It conceptualizes health as a disease-free state. This view was very popular among physicians and medical personnel in the first half of the twentieth century. A major flaw with this view is that it works on the assumption that health

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and disease are objective phenomena that can be observed and quantified. A second flaw was that rather than representing the presence of certain attributes, it defines health solely in terms of lack of ill health. Thus, according to the medical concept, there is a dichotomy between health and illness. What is not illness is health! Truth is, there is a continuum between absolute illness and absolute health. One can have some disease, yet be healthy. Hence, it is flawed to take health as the absence of ill health.

A third flaw of the traditional medical concept was that it neglected the individual as a whole when it focussed its attention on specific diseases. Any workable concept of health necessarily has to be a **holistic concept.** An attempt to define health more holistically was made by the World Health Organization (WHO). WHO conceptualizes health as "a state of complete physical, mental and social well-being and not merely as the absence of disease or infirmity". This concept was a radical departure from the medical concept in that it defines health in terms of presence of some positive attributes. It conceptualizes health as a positive state of well-being in which not only physical health but also social, psychological, economic and political aspects of health are incorporated into a single definition.

Yet, there are certain grave problems with the WHO concept of health. Some important ones are :

1. Being so broad and vague, the WHO concept has low utilitarian value. Any concept needs to be specific to be defined operationally and to be applied to practical situations.
2. Though words like well-being and wellness are used freely, these concepts haven't been clearly defined.
3. It is a utopian view of health. The WTO definition, it seems, tries to paint a perfectly healthy state which is unrealistic and unreachable.

The **ecological concept of health** emerged in reaction to the previous medical and holistic approaches discussed above. This concept is different from the earlier concepts in two aspects: 'first, by conceiving health as a more relative sort of concept and second, by placing a greater emphasis on the interrelationship between the environment and the individual's quality of life. These ecological and relative definitions of health were heavily based on an evaluation of the person's level of functioning and adaptation to the environment' (Boruchovitch and Mednick, 2002).

This view has immense utilitarian value, in the sense that (1) it conceptualizes health as a relative concept, (2) it focuses on the functional adaptation of the individual to her environment, hence includes issues like quality of life as well as maladaptation and lastly (3) it is a specific definition. Hence, it can be used to operationally define health.

Some attempts to integrate various ideas of health have been made. However, other psychologists argue that health refers to a number of entities and therefore, is a multi-dimensional concept. Smith (1981) has tried to organize (not integrate) multiple views of health into four distinct models :

(a) Clinical

(b) Role performance

(c) Adaptive and

(d) Eudaimonistic

Smith reiterates that these four models are not exclusive but are progressively wider

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conceptualizations of health. For instance, the clinical model defines health minimally as the absence of diseases. On the other end, the eudaimonistic model is the broadest concept. It includes the basic ideas of the three earlier models and also issues of self-actualization and self-fulfilment.

Positive Psychology is the branch of psychology that focuses on positive experiences rather than negative ones. Positive psychology hasn't contributed to the concept of health in a big way; yet it has helped shift the focus of attention towards well-being. Central to positive psychology is the idea that the individual's experience matters. It defines health in terms of the individual's perception of how healthy she is. While earlier ideas of health were from academic and professional perspective, positive psychology states that the health of an individual is how healthy he/she feels ! This is radical in the sense that how one feels also determines her health. If, suppose, a man has good functional adaptation to his surrounding and is not diseased, yet is pessimistic and unhappy with me. Can this man be called healthy?

After discussing the various conceptualizations of health in modern western psychology, let us now take a look at cross-cultural variations in the idea of health. It would amaze you to know that spiritual health is a part of the concept of health in many cultures. Yet, this concept was largely absent in western psychology before Maslow. Here, I will deal with a single cross-cultural definition of health: that of yogic psychology.

Health in Yogic Psychology

While a holistic concept of health has evolved in the west only lately, an equally holistic concept of health can be found in **yoga literature** of ancient India. **Yoga** doesn't belief in **dichotomies** of positive health and illness; nor does it recognize divisions on the lines of physical, mental and spiritual dimensions. Rather, all these ideas are integrated in a model called the **Anasakti-Asakti model.**

Asakti refers to attachment – attraction towards individuals or objects with expectations. This attachment leads to cathartic fixation, to use the Freudian terminology, and may lead to frustration and mental problems if the need is not fulfilled. Asakti leads to anxiety, depression, fear and insecurities. Asakti manifests itself in three important psychological aspects :

1. **Raga** : It is the attraction towards selected persons and objects with expectations and ego involvement.
2. **Dwesha** : It is a feeling of hatred and a tendency to cause harm. Dwesha leads to negative emotions, violence, aggression etc.
3. **Ahamkara** : It refers to the need for recognition, egoism and arrogance.

Anasakti is detachment. Only detachment from the material world can help one to pursue self-actualization. Inherent here is also the notion of spiritual health. An anasakt individual experiences spiritual unity of atman (herself) with the Brahman (the supreme one). As a result, the anasakt individual is free from pain and sufferings.

Asakti and Anasakti are not dichotomies. Rather, they are polar opposites on a continuum .... no person is 100% detached or 100% attached.

To conclude, health is a multi-dimensional concept that means not only the absence of diseases but also proper **functional adaptation**

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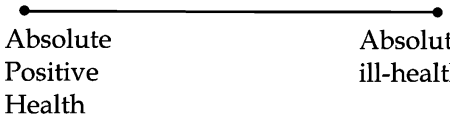
to environment. Health doesn't refer to dichotomous states but to a continuum as under :



Today, the concept of health is being reinvented to include well-being, feeling of happiness, a sense of satisfaction and harmony between mind and body.

Conceptualizing Health in India

Clearly, the concept of health varies society to society. The Anasakti-Asakti model is one of the many definitions of health forwarded in Indian philosophical texts. There are many more conceptualizations that make the Indian concept of health broad-based and affirmative (D. Sinha, 1990).

For instance, Sushrut, the father of medicine and surgery in ancient India, defined health as **prassannanmendriyanamah Swastha** i.e. health as a state of delight with feelings of spiritual, physical and mental well-being. The essential features for a healthy person are possessing in the right quantity (Sama), the

1. Defects or weaknesses (Samadosah),
2. Digestive quality (Samaagni),
3. Semen (Samadhatu) and
4. Normal bodily functions (Malakriya)

(D. Sinha, 1990)

But then, you may say these are only definitions mentioned in ancient scriptures. How do the people define and conceptualize health today? Some empirical studies have thrown light on this. For instance, Tripathi (1993) conducted a study of the meaning of health and sickness in rural areas of Allahabad. Using statistical tools, he derived three factors which explained 62.5% of the total variance. These are:

1. Vitality : powerful, untiring, physically strong, good digestion etc.
2. Hardiness : Rarely fall sick, high immunity, not lazy etc.
3. Fitness : Energetic, strong, carefree

A study that throws light on the superstitions attached to health beliefs was by Rizvi (1991). He studied the health beliefs of the Jaunsaris of the Himalayan region and found that health for Jaunsaris means proper functioning of the body. Those who had a muscular body, were able to work hard and could digest good food were considered healthy. On the other hand, ill-health was defined as not feeling well. Most of the diseases were attributed to sins, crimes, non-observance of religious laws etc. Hence the cure prescribed was to appease supernatural entities with prayers, vows, holy baths and sacrifices.

n Well-Being

Well-being can mean two concepts at the same time : **economic well-being** which is an objective measure of economic standing of an individual. Alternately, it also refers to **subjective well-being** i.e. an individual's degree of satisfaction with various facets of life. It is subjective because it is the individual's perspective of her satisfaction with life.

Subjective well-being (SWB) is defined as an individual's cognitive and affective evaluations of her life (Diener et al, 2002). Simply stated, it is a technical term for **happiness.** The more satisfied you are with life, happier you are. The focus of this section is on subjective well-being which is now touted as the best measure of

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health of an individual.

For many years, the focus of researchers was primarily on negative emotions such as anxiety, depression and anger. The school of positive psychology seeks to shift the focus to positive emotions of happiness and satisfaction. Well-being refers not just to positive health but also to aspects of emotion that make life more satisfying.

So, what constitutes SWB ? According to Seligman (2004), there are three components of SWB :

1. Pleasure
2. Engagement
3. Meaning

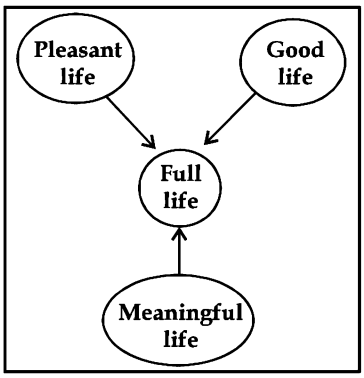
The **pleasure** route to greater happiness (i.e. SWB) is hedonic, increasing positive emotion. Within limits, this route leads to positive emotions. However, there are limits set on positive emotions by genetic factors. Heredity determines a certain band in which positive emotions vary. Most modern researchers agree that there is a ***happiness disposition*** i.e. some individuals are hereditarily more predisposed to have better positive emotions. Fortunately, positive emotion is not the sole determinant of happiness and those with lower positive emotions (pagged on their hereditary codes) can still achieve higher levels of happiness (Seligman, 2002).

Engagement refers to the pursuit of activities that lead to intrinsic gratification. We are often intrinsically motivated to do certain things over others. One may find gratificatioin in watching movies, another in writing, still another in reading psychology (though I am not sure how psychology can help gratify one!) and yet another in arts. There is no short-cut to gratification. We can take short-cuts to pleasure (e.g. masturbating, taking drugs, watching pornography, taking good food etc.). But there is no short-cut to gratification. It demands ego-involvement.

The third route of SWB is that of finding a **meaning in life.** How does one make her life meaningful ? Knowledge, altruism, family and community welfare, and spirituality are certain elements, the pursuit of which leads to happiness. Basically, these are some activities that help us realize something higher than self, a **'meaningful life'**, for example, altruism helps the individual self to connect to the society at large. Spirituality helps the self connect in harmony with the divine. Whether divine exists or not, this leads to harmony.

Peterson et al. (2005) have developed some measures of happiness to assess how people use the three routes to happiness. They have found that people tend to rely on one route rather than another. Following this finding, they have given a typology :

1. **The pleasant life** : Tendency to pursue happiness by boosting positive emotion.
2. **The good life** : Tendency to pursue happiness via gratifications.
3. **The meaningful life** : The tendency to pursue happiness via using our strengths towards something larger than ourselves.
4. **The full life** : A person who uses all three routes to happiness is said to lead a full life.



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The pursuit of happiness is of paramount importance in modern health psychology because of its importance to human beings. It is so important to humans that 'the pursuit of happiness' is an academy award winning movie starring Will Smith. The concept of SWB helps us to understand factors that make up happy and satisfied, beyond material consumption.

Factors affecting Positive Health

Many models explaining the nature of positive health have been forwarded by psychologists. For example, the stress-model believes that how one deals with external stressors determines how healthy she is. Many other models look into many other factors that affect positive health. A few factors that affect positive health can be listed here :

1. Stress coping style
2. Resilience
3. Beliefs and Attitude
4. Lifestyle
5. Social support
6. Finding meaning in life
7. Anasakti
8. Sense of humour

Some of these factors are elaborated below :

Stress Coping Style

There are countless ways in which people may respond to a stressful event; yet broadly there are three coping styles :

1. Problem-focused coping
2. Emotion-focused coping
3. Seeking social support

Problem-focused coping refers to strategies to directly confront and deal with the demands of the situation. For example, if I have misunderstandings about a person and it is causing me anxiety, I would directly approach the person. If, on the other hand, I don't directly deal with the stressful situation but attempt to manage the emotional response that results from it, it is emotion-focused coping. This style may take many forms – denial, avoidance etc. I may deny that there is any misunderstanding or I may avoid stressful situations. A third class is seeking support i.e. turning to others for assistance and emotional support.

It has been found that problem-focused coping and seeking social support lead to favourable adjustment to stressors. On the other hand, emotion-focused coping strategies that involve avoiding feelings leads to poor adjustment. In one study (**Holahan and Moos, 1991**), coping patterns in more than 400 California adults were studied over a 1-year period. The results confirm the above conclusion. The study further found that emotion-focused strategies lead to depression and poor adjustment to stressors.

Resilience

Resilience is the ability to bounce back from adversity. Resilience shows the unusual ability of some to manage extremely stressful situations. The research on resilience has mostly focused on resilient children. For instance, Priscilla is a child who grew up in a terrible home environment with a psychotic mother and a father who abused her and committed suicide in her presence. Despite these experiments Prescilla grew up into a highly successful woman (narrated in Passer and Smith, 2007, p. 500).

Above example shows that some individuals have better ability to cope with stress than others. It has been found that resilient kids have

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certain unique characteristics, like adequate intellectual functioning, social skills, self-efficacy, faith, optimism and hope.

Beliefs and Attitude

Great therapists like Ellis and Beck have observed that many negative emotions are the result of incorrect cognitions and beliefs. Beliefs, attitudes and cognitions are important factors influencing positive health. It has been empirically proved that **optimistic expectations** and **positive attitudes** lead to better health. On the other hand, rigid expectations from life leads to extreme stress. Pessimism leads to unnecessary **anxiety and depression.**

In one study, women suffering from cancer were studied over a 5-year period (Levy et al., 1988). It was found that women who were optimistic lived longer on average than pessimistic women. This shows the direct correlation between health and optimism. In a one year long study conducted by **Peterson and Seligman** (1987) optimists were found to have half as many infectious illnesses and visits to doctors as pessimists.

Finding Meaning in Stressful Life

Humanistic theorists have emphasized that human beings are motivated to find meaning in life. There are many routes to exploring meaning in life, that includes creativity, artistic work, spirituality, altruism etc. Some people turn to spirituality and find meaning of life in divinity. Surprisingly, spirituality has been positively correlated with positive health. Spiritual beliefs provide personal beliefs that are a source of comfort in times of crisis.

A behaviour that peculiarly leads to positive health is **altruism.** Many researchers have shown that by helping others, the altruist basically helps himself. It gives a meaning to life, but how ? Altruism helps the self become part of the larger, undivided self. In an analysis of 1700 women who were regularly involved in helping others, it was found that there was considerable improvement in the physical health of the helpers. Disorders such as headaches, multiple sclerosis and depression suffered by the helpers showed improvement. This was in addition to the positive sense of having done some good which enhances one's self-concept. (See Pandya, 1997). Hence, 'altruism behaves like a miracle drug and a strange one at that. It has beneficial effects on the person doing the helping – the *helper's high*. It benefits the person to whom help is directed; and it can stimulate healthy responses in persons at a distance who may view it only obliquely... part of the warm feeling may be due to coming home – returning to our original, undivided, larger self, the part of us that connects, that knows no divisions in space and time' (Dossey, 1991, p. 290).

Sense of Humour

Laughter is the best medicine, and its therapeutic uses have been well documented. The value of laughter has been documented even in our ancient text *Hasya Rasya*. How is humour related to positive health ? Basically, humour leads to unparalleled relaxation. Hence, a person with a sense of humour affords better and more positive affect, even in stressful situations.

This is the reason why many psychologists recommend patients of depression and anxiety to join laughter clubs. In a typical laughter exercise, a regular group gathers early in the morning. 'After initial warming up exercises, aimed at expanding the lungs, a leader starts off a round of laughter. Initially this happens

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through jokes but the group learns that a single person bursting into laughter soon infects the rest of the group. Variations on the theme have been devised – laughing with the mouth shut, laughing with the mouth wide open but without creating any sound. These are said to expand the lungs and ensure better oxygenation of the blood in addition to releasing tension'. (Pandya, 1997, p. 194-195).

n Factors affecting Subjective Well-Being

To assess the factors affecting subjective well-being, researchers typically study factors that predict satisfaction and happiness. Based on an array of research on various factors, the following list can be drawn (Weitten, p. 422):

1. Factors that do not predict satisfaction and Happiness
   (a) Money
   (b) Age
   (c) Physical attractiveness
2. Factors that moderately predict satisfaction and Happiness
   (a) Health
   (b) Social Network
   (c) Religion
   (d) Culture
3. Strong predictors of Subjective Well-Being (SWB)
   (a) Work
   (b) Love and Marriage
   (c) Personality

Factors that do not predict SWB :

Money, beauty and physical attractiveness are certain factors that we often believe lead to happiness. Especially in our modern consumerist culture, money is said to satisfy the wants of the consumer. And it is believed that the more you consume, the happier you are. However, psychological studies have provided certain counter-intuitive results. Obviously being very poor makes people unhappy and reduces their SWB. But once people rise above the poverty level, little relation is seen between income and SWB. For instance, one study found a correlation of only 0.12 between income and SWB in USA, an affluent country (Diener et al., 1993). Empirical surveys have consistently found that even those who are poor or disabled characterize themselves as fairly happy (Diener and Diener, 1996). Similarly, even though good looking people enjoy a variety of advantages in comparison to unattractive people, it doesn't mean that they have better SWB.

Finally, it is generally believed that SWB decreases in old age. But empirical findings have shown that age accounts for less than 1% of the variation in people's sense of satisfaction with life (Inglehart, 1990).

Moderately Good Predictors of Health

Good physical health is obviously a factor influencing happiness. But it doesn't mean that people with health problems can't be happy. Research reveals that individuals who develop serious, disabling health problems aren't as unsatisfied with life as we would like to believe (Myers, 1992). Rather, good health may not lead to happiness as people tend to take good health for granted (Freedman, 1978).

Social networks like social support, family and friendship networks contribute to SWB.

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Good interpersonal relations with others lends a sense of satisfaction. Also, spirituality and religious beliefs seem to foster happiness. Researchers haven't yet established the exact link but many large-scale surveys suggest that people with religious convictions are happier than people who label themselves as non-religious. **Myers** (1992) argues that this is because religion gives people a sense of purpose and meaning in life.

Cross-cultural variations in SWB have been noted. These variations have mostly been related to individualistic versus collectivistic orientation. In individualistic cultures, *the individual puts personal goal ahead of group goals and defines her identity in terms of her personal attributes.* In contrast, individuals of collectivistic cultures *put group goals ahead of personal goals and defines her identity in terms of the group she belongs to* (Weitten, P. 424). Interestingly, people from individualistic cultures report somewhat higher SWB than that of collectivistic cultures (Diener and Suh, 1999). No conclusion should be drawn from this, however, because of presence of many other variables (for example, western countries are both rich and individualistic. Though wealth doesn't predict SWB, poverty does. Countries of the east with collectivistic orientation are mired by large-scale poverty).

Strong Predictors of SWB

Though people in romantic relations and marriages often complain a lot, they have been found to be happier than those who aren't involved in a romantic relation or marriage. Married people are happier than those who are single or divorced (Myers and Diener, 1995). Another strong predictors of SWB is **work.** Humanistic theorists have emphasized that job satisfaction helps the individual realize her potential and actualize her self. No wonder, studies have shown that job satisfaction leads to SWB (Warr, 1999), whereas unemployment has strong negative effects on SWB (Argyle, 1999).

Finally, there are some dispositional factors in the level of happiness. Personality is a strong causal factor of SWB. Some people seem to be happy regardless of triumphs or setbacks; others seem to be unhappy no matter what. For instance, in one study it was found that winning lottery tickets or being victims of accidents only marginally changes level of happiness (Brickman et al., 1978). Many scholars today agree that happiness is more due to internal factors than external factors. Strong correlations have been found between SWB and personality traits like extraversion, self-esteem and optimism. For example, people who are outgoing, upbeat and sociable tend to be happier than others (Also see the section on happiness disposition).

Conclusion

This section just gave an overview of certain factors that affect subjective well-being. However, one must understand that subjective well-being is subjective i.e. it is about how one feels. I have discussed research findings that money doesn't lead to happiness beyond a limit. But a miser may feel utmost happiness on being able to hoard money ! When it comes to happiness, everything is relative (Argyle, 1999). Above factors are only indicative of the general population. Causality for SWB vary across individuals and across contexts.

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n Happiness Disposition

Some people seem to be destined to be happy, while some others unhappy, whatever be their personal achievements or setbacks. Back in my graduation days, some students were never happy with life. A student I knew did not show any enthusiasm after his application for higher education in a top US university was accepted. On the other hand, I would be ready for parties even on days my research guide scolded me for my lousy project work. My guide believed that I am shameless, but the reality is that I am predisposed to be a happy person !

Disposition is the tendency in an individual to react to a given situation in a specific way. Hence, it includes inherent personality trait or biological attribute. Happiness refers to ability to cope with situations with positive emotions and getting satisfaction from life. **Happiness disposition** refers to the **natural tendency** of some people to deal with a stressful situation more positively than others. From the previous section, we know that many factors affect a person's subjective well-being (SWB). These factors can be external or internal. Happiness disposition concentrates on the factors internal to the individual that affect happiness and SWB.

There are two major internal factors that may predispose some towards happiness :

1. Personality factors
2. Biological and genetic factors

Personality factors have shown strong correlation to happiness. Extroverts, for instance, have been found to be happier than introverts. People who are outgoing and sociable tend to be happier than others (Lucas, Diener and Suh, 1996). Other traits like self-esteem and optimism also are good predictors of happiness.

Biological factors also seem to affect happiness disposition. A study of 2,310 identical and fraternal twins found that identical twins are far more similar in subjective well being, whatever their life circumstances be (Lykken and Tellegen, 1996). The underlying mechanism isn't clear, though it may be because of genetic factors that control right-hemisphere and left-hemisphere activation of brain. It is also possible that neurotransmitters that lead to positive and negative emotions are genetically different in people.

Indeed, Eysenck (1967) has tried to link the two factors discussed above : personality and biological factors. He had made a distinction between **neuroticism** and **emotional stability** as a trait in people. In neurotics, sudden change in arousal of autonomic nervous system takes place.

Today, it is accepted that individual differences in happiness exist. Happiness disposition refers to the internal factors that cause these individual difference. Subjective well being is the result of interaction between happiness disposition and external factors.

n Lifestyle Factors in Health

Health of an individual is a product of her genes and environment. While genes predispose her towards some diseases, environmental factors like life stress, lifestyle, bacteria, virus, success and failure have an important role to play in the incidence of diseases. Of these environmental factors, **lifestyle** is a singularly important factor that is leading to an increased prevalence of psychosomatic diseases. The aim

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of this section is to discuss the **modern lifestyle** and its demerits; lastly, a normative model of lifestyle for perfect health is provided.

The Modern Lifestyle

The modern lifestyle is a complex whole of learned habits in urban India which is responsible for various ill-healths. Let us take certain examples :

- **Eating habits** : In the name of modernization, various unhealthy eating styles are promoted. Partly this is because of **consumerism** i.e. advertisements that create a perception that larger the consumption of food, greater the happiness. Secondly, the consumption of junk food like burgers, pizzas etc. with high fat content is increasing. This leads to problems of obesity, coronary heart diseases and other ailments. The per capita consumption of alcohol, tobacco and fats is rising by the day. About 53% of adult males and 3% of adult females smoke bidi or cigarette.

  Also our eating preferences are shifting from fresh and fibrous food to heavy, oily, spicy and processed foods, which we can't digest easily (Parashar, 2000).

- **Exercise** : Previously, people used to get sufficient physical exercise owing to low development of transport and certain healthy lifestyles. But the situation has changed. For example, the prevalence of elevators in most modern buildings and preferred usage of these elevators has decreased the use of stair-case. In an article in the Times of India, psycho-analyst Sudhir Kakkar had opined that television (TV) has led to a lifestyle where obesity increases and scope of physical exercise is low.

- **Increased stressors** : In today's times wants are unlimited. To fulfil these wants, the income desired is unlimited. Aspirations are high. Hence, there is always tension to earn more. If a person earns more, she is tensed that she has to spend more. She hits the shopping mall and finds that what she earns is still less to meet her consumerist wants. The tension in offices is also more. Individuals hardly get job satisfaction as the only factor that motivates them is the salary which never seems to be sufficient.

There are other stressors working in modern cultures. In urban India, for instance, the social support and friendship network is low. Even divorce rate is high. As a result, a major factor behind stress reduction is absent.

The uneven and odd time at which people in metros sleep is also an issue. Many BPO employees work in night-shifts and hence face many psychological problems.

From above, we see that modern lifestyle leads to both physical and psychological problems. **Parashar (2000)** is so frustrated with the lifestyle that he opines : 'our present lifestyle has forced us to become materialistic, selfish, egoistic and self centred. We have restricted ourselves only to physical health and we have forgotten about the mental, social and spiritual health. Materialism is indeed the original cause of all misery including diseases and a loss of a balanced state of mind'. He has made certain amazing revelations about how our lifestyle is linked to diseases : 'Unmindful modernisation

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is proving to be a curse for the health of Indian people. Almost half of the Indian population is suffering from some physical disease or mental disorder. Presently 50 millon Indians are suffering from blood pressure and other cardiac disorders. The number of diabetic patients is 30 million. About 8 lac people die every year due to tobacco consumption and India tops the list of patients having mouth cancer worldwide ... the number of patients suffering from anxiety, depression, insomnia and addiction is rising sharply... one of the main factors responsible for this situation is the faulty lifestyle we have chosen in the name of modernisation. The urban population has forgotten the basic principles of healthy living like – early to bed and early to rise, physical exercise, diligence, contentment, endurance, cooperation etc.' (i bid).

Ayurveda : Normative Model for Perfect Health

The modern lifestyle is harmful for health. Then which lifestyle should we follow for a better health ? While western psychologists are researching on various alternative lifestyles, Parashar (2000) proposes that we use the life style advocated in Ayurveda. The life style advocated by Ayurveda is based on four fundamental principles :

1. *Ahara* (food)
2. *Vihara* (Recreation)
3. *Achara* (Routine)
4. *Vichara* (Thinking)

Ayurveda had recognized that a healthy lifestyle should lead to both physical and psychological well-being. Hence, it tries to fuse Vichara (thinking) and Vihara (recreation) with Ahara and Achara.

Ahara : Ayurveda advises that vegetarian food should be preferred over non-vegetarian food. For better health, our food should contain fresh vegetables and sufficient fibre contents. As already discussed, spicy and junk food causes obesity, diabetes, gastric ulcers and hypertension. The oil that we use should be wisely selected. Saturated fats derived from animal food, coconut oils and palm can clog arteries if consumed in excess. South Indian people suffer from a number of diseases related to saturated fats due to excess consumption of coconut oil (Parashar, 2000). Rather, polyunsaturated fats found in the oils of corn, sunflower, fatty fish and cotton seeds actually reduce blood cholesterol level. Similarly, monounsaturated fats found in olive peanuts help protect against incidence of heart diseases.

Ayurveda further advocates that the principle of "*Virudh Bhojana*" should be followed. "Virudh Bhojana" or opposite food means one mustn't consume two food items with opposite effects at the same time. For example, items like ice cream shouldn't be taken with hot tea or coffee. Similarly, it is not advised to take meat with milk; curd with milk etc. If taken so, it may lead to stomach imbalances and such problems as gastric upsets and food poisoning.

Achara : Ayurveda has distinguished three types of routines :

1. *Ritucharya* (Season routine)
2. *Dincharya* (Day routine)
3. *Ratricharya* (Night routine)

Ritucharya means to follow a lifestyle in

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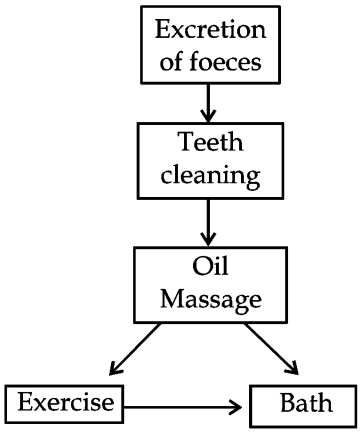
accordance with the six seasons of a year. For example, during summer season, we should take light food containing plenty of fluids, brisk exercises should be avoided. Similarly, Dincharya and Ratricharya specify that one should eat and act according to the time of the day. One should wake up early in the morning. 'Dawn drinking' should be the first act after waking. It refers to drinking of water kept overnight. Dawn drinking ensures smooth excretion of body waste and is a remedy for constipation (Parasher, 2000). This should be followed by the following routine :



Ratricharya norms advise to take dinner 2-3 hours before sleep. It also prescribes that people should engage in sexual intercourse only during the night as a rest of few hours is necessary after sexual intercourse for the body muscles to come back to the relaxed state.

Vihara and Vichara : While Ahara and Achara refer purely to the physical and physiological aspects, Vihara (recreation) refers to psycho-physiological aspects and Vichara (thinking) refers to mental aspects (Parasher, 2000). Vichara norms specify that one should neither be driven by greed nor be dominated by emotions of fear, anger, jealousy, guilt or worry. *Anasakti* is a related concept. Detachment from hatred or greed forms part of the thinking process of a healthy lifestyle.

Normality and Abnormality

Abnormal is what is not normal; and normal refers to a behaviour that doesn't violate the norm. My purpose in making this ambiguous and confusing statement is to show that there is no agreement regarding what is normal and what is abnormal. Usually the definitions of abnormality include the following concepts, called the 4 - Ds (Christensen et al., 2001) :

1. Deviance
2. Distress
3. Dysfunction
4. Dangerousness

Abnormal behaviour is deviant behaviour. But deviant from what ? In what sense ? Albert Einstein was abnormal in the sense that he was too intelligent for humans. Pop queen Madonna is deviant in the sense that she still performs in provocative clothes at the age of fifty.

Hence, **deviance** itself isn't a sufficient condition. Nor is **distress**. Distress is seen in abnormal behaviours like Post-Traumatic Stress Disorder (PTSD) and panic attacks. Hence, distress is a good predictor of mental disorders, especially **prolonged distress**. Abnormal behaviour may also be dysfunctional in the sense that it interferes with the normal functioning of the individual. Finally, sometimes the abnormal are dangerous. Hence, if an individual is dangerous and she is capable of an act without any provocation or intentionality, she may be suffering from **insanity.**

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From the above discussion, the only thing clear is that no clear boundary exists between normality and abnormality. For functional usage, usually psychologists use a classification of mental disorders. The first modern classification was proposed by German psychiatrist Emil Kraeplin (1883). Kraeplin had proposed that the professional should identify **symptoms** (what the person complains of) and **signs** (indications of abnormal function from behavioural observation or otherwise), and finally establish the problem's onset and course (how the disorder has developed). Together, these factors should be able to help the clinician to diagnose the patient as suffering from a particular illness. Kraeplin's system of classification is no longer in use but it forms the basis of all modern classifications like World Health Organization's International Classification of Disorders (ICD) and the American Psychiatric Association's (APA) Diagnostic and Statistical Manual of Mental Disorders (DSM). The latest version of APA's manual, DSM-IV, is the most popular system of classification.

The DSM-IV adopts a system of diagnosis that is multiaxial and proceeds by resolving all these axes :

- What are the symptoms ? (Axis I)
- Are there any abnormal functionings that the individual is predisposed to ? For example, are there any personality disorders or developmental disorders ? (Axis 2)
- Are there any relevant physical disorders ? (Axis 3)
- What is the intensity of stressors ? (Axis 4)
- What is the individual's ability to adapt to the stressors ? (Axis 5)

n Causal Factors in Mental Disorders

In this section, we will investigate into various factors responsible for mental disorders like schizophrenia, delusional disorder, anxiety and mood disorders. The factors are primarily of three types : biological, psychological and socio-cultural factors. Many of the proposed causal factors have been proved beyond doubt while others are lacking in empirical validity (for example, Freudian explanations of schizophrenia). We must respect the fact that multiple factors act together to produce effects like mental disorders. Hence, I attempt to integrate various perspectives in explaining the causality of mental disorders.

There are three types of causes of disorders:

1. **Predisposing factors** or vulnerability factors are factors that do not themselves lead to disorder but increase the vulnerability of the individual to the disorder. Biological dispositions, occurrences in childhood (usually used by psychoanalysts to explain disorders) and personality factors are important predisposing factors.
2. **Precipitating factors** or stressors are the immediate conditions that trigger the disorder. This includes cognitive factors, environmental stressors and socio-cultural factors.
3. **Reinforcing factors** : Factors that reinforce an already occurred disorder; many behaviourist explanations are reinforcing factors.

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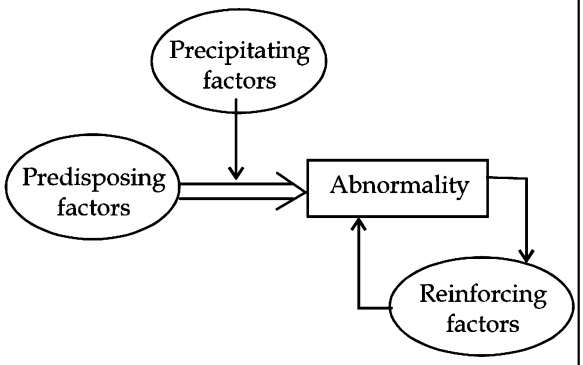
These factors can be represented as under :



Schizophrenia and Delusional Disorders

Disorders that pertain to loss of contact with reality are called **psychosis.** Typically, the psychotic people may have **hallucinations** (false sensory perceptions) or **delusions** (false beliefs) or both.

Schizophrenia literally means "split mind". It is a particular psychotic condition that fulfils certain criteria. Typically, schizophrenia suffer from four types of delusions :

1. **Delusion of grandeur :** Belief that one is of great importance.
2. **Delusion of persecution :** Delusion that one is the victim of enemy plots.
3. **Delusion of reference :** Belief that the actions of others or world events are conspiracies against her.
4. **Delusions of control :** A belief that other people are controlling one's actions.

Delusions are most prominent among the **paranoid-type schizophrenics.** The catatonic type schizophrenia, on the other hand, are characterized by immobility or repetitive movements like **echolalia** (reception of words) or **echopraxia** (repetition of observed behaviour).

A third variety of schizophrenia– the **disorganized type**– is characterized by inappropriate affect (for instance laughing at a tragic news or crying on hearing a joke), together with incoherent speech and confused behaviour. Many other schizophrenics can't be put into any of these categories and hence are classified as **undifferentiated type of schizophrenia.**

Delusional disorders are psychotic problems characterized by nonbizarre delusions (already discussed) without other schizophrenic signs.

• Causal factors

We shall study various causal factors bearing the fact that schizophrenia is multifactorial in origin :

Pre-disposing factors :

Many empirical evidences point towards a genetic predisposition in schizophrenia. Twin studies show that identical twins have higher rate of concordance than fraternal twins in schizophrenia. Further, adoption studies show that the ego has more concordance with biological parents than with adoptive parents.

Usage of techniques such as PET and MRI have revealed that many schizophrenics have **brain abnormalities;** a general loss of neurons in the cerebral cortex has been observed using MRI. This may explain the symptoms of disordered attention and perception reported by patients, because such cognitive functions are performed in the cerebral cortex.

The **dopamine hypothesis** states that the cause for schizophrenia is an increase in activity of the dopamine system in the brain. People diagnosed with schizophrenia seem to have more dopamine receptors on neurons than non-schizophrenics. It has also been seen that injecting schizophrenics with drugs that

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increase dopamine activity in the brain increases their symptoms. However, the exact mechanism of dopamine activity is not known. The neurons affected by excess dopamine secretions extend from the midbrain to limbic system and these play crucial function in linking perception with memory. May be dopamine-caused hyperactivity leads to a situation in which the brain can not relate sensory input with memory, nor can it ignore the sensory input.

Precipitating factors

Many stressors have been identified that may precipitate the condition to lead to schizophrenia. **Freud** believed that to escape from unbearable stress and conflict, the schizophrenic uses the defence mechanism of **regression,** in which she retreats to an earlier stage of psychosocial development.

Some cognitive theorists reason that when people develop a defect in the attentional mechanism that filters out irrelevant stimuli, they are overwhelmed by external stimuli. There is a stimulus overload that leads to disorganized thought pattern, hallucinations and delusions.

The incidence of schizophrenia is five times as high in lowest socio-economic groups as in the highest. Owing to this finding, it is reasoned that the higher level of stress that low-income people experience may leads to higher prevalence of schizophrenia.

Even the family is said to act as a source of precipitator (stressor). According to the double-bind hypothesis, the parents of schizophrenic patients behave towards them in self-contradictory ways (double-binds). For instance, a mother may encourage an unemployed son verbally but through non-verbal cues show that she thinks he is a loser. Repeated exposure to these double-binds leads to abnormal ways of coping that finally lead to schiphrenia.

Reinforcing Factors :

Once the label of schizophrenic is put on a patient, she faces social stigma. This stigma acts as a **self-fulfilling prophecy** in reinforcing schizophrenia. In a study conducted in the 1970s, **Rosenhan** got eight normal people to report hallucinations in different hospitals. All were diagnosed as psychotic and admitted as patients. After admission, they tried to behave normally but it became increasingly difficult for them to do so due to the hospital staff's self-fulfilling prophecies. Their normal behaviour was labelled as schizophrenic. For example, if a patient wrote a poem, the staff reported that they engaged in writing behaviour! Finally, they became bored, listless and apathetic (these are the symptoms of schizophrenia!).

n Mood Disorders

Mood disorders are emotion-based disorders. There are two types of mood disorders : unipolar disorder and bipolar disorder. Unipolar disorder or depression refers to an abnormal condition where the individual is in an intensely depressed state, owing to which she cannot function effectively.

Emotional symptoms of depression include sadness, anxiety, inability to enjoy and hopelessness. Depression is primarily a disorder of emotions or mood; but there are other types of symptoms also. Some other symptoms can be summarized as :

- ❖ Motivational Symptoms
  - Loss of Interest
  - Lack of drive
  - Difficulty in taking any initiative

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- ❖ Cognitive Symptoms
  - Negative cognitions about self, world and future
  - Incorrect attributions
  - Automatic thoughts
- ❖ Somatic Symptoms
  - Lack of energy
  - Loss of appetite
  - Sleep difficulties

In bipolar disorders, depression alternates with periods of mania, an emotional state in which the individual is very excited and shows behaviour that is quite opposite to depression. In the manic state, the individual turns megalomaniac. She has grandiose cognitions and doesn't consider the negative consequences before acting on these grandiose plans. Speech is often rapid, as if she has to say as many words as possible in the time allotted.

Causal Factors in Depression :

Therapists often differentiate between two kinds of unipolar disorders : reactive depressions which happens without any trigger. Owing to this distinction, researchers are investigating into various external and internal factors that result in prolonged depression. While **stressful events** seem to trigger depression, internal factors like cognitions and neurochemicals also play a significant role.

Internal Factors : The most dominant view about depression is that of cognitive theorists. **Aaron Beck** (1976) argues that the emotional state of depression is a product of incorrect cognitions. He has proposed a number of **negative thoughts** that the depressed have :

- **Cognitive triad** of depression : Interpreting one's self, experiences and future in a negative way.
- **Automatic thoughts:** Persistent and automatic thoughts that pop into the conscious automatically and reminds the patient of her inadequencies.
- **Errors in thinking,** manifested in many forms, for example blaming oneself for bad weather.

The errors in thinking are a result of a **depressive attributional pattern**, attributing successes to factors external to self and blaming self for **negative outcomes**. Another cognitive dynamic forwarded by **Martin Seligman** is **learned helplessness**. He conducted a study of dogs in situations from where they couldn't escape any negative consequences. Finally, the dogs learned to be helpless i.e. didn't escape the negative consequences even when given the chance. It is reasoned on this basis that depressed people believe bad events will occur and there is nothing they could do to prevent these or cope with these events.

A problem with the cognitive approach is that it confuses cause and effect. Does depression lead to such negative thoughts or do the negative thoughts lead to depression ? Cognitive theorists use incorrect cognitions to explain depression whereas it may be that incorrect cognitions are the consequence of a depressive state. Secondly, they don't say why some people become depressive and other don't. This difference, however, can be explained by **genetic** and **neurochemical** factors.

Neurological research has shown that depression is associated with low levels of a neurotransmitter called **norepinephrine**. There is also evidence that another neurotransmitter, **serotonin**, may be low in quantity in the brain. This view is supported by the fact that drugs that increase the level of norepinephrine (like **tricyclics**) and serotonin (like **prozac**) act as antidepressants. Taking these drugs can help one out of depression.

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External Factors : It is generally agreed that an extremely stressful condition acts as the trigger (or precipitating factor) in depression. For instance, it has been seen that depression runs in families. A reason for that may be genetic. But Hammen (1991) believes that an even greater factor is that children of depressed people often experience poor parenting and many stresses as they grow up. As a result, they may fail to develop a positive self-concept or proper coping skills; this makes them quite vulnerable to depression.

Once depression starts, it becomes a **vicious circle** due to a self-reinforcing mechanism. This mechanism is explained by **behaviourists**. They reason that depressed people show decreased reward-seeking behaviour and avoid others. Owing to this, their social support decreases and others get alienated from them. This further increases depression. This can be respresented as under :

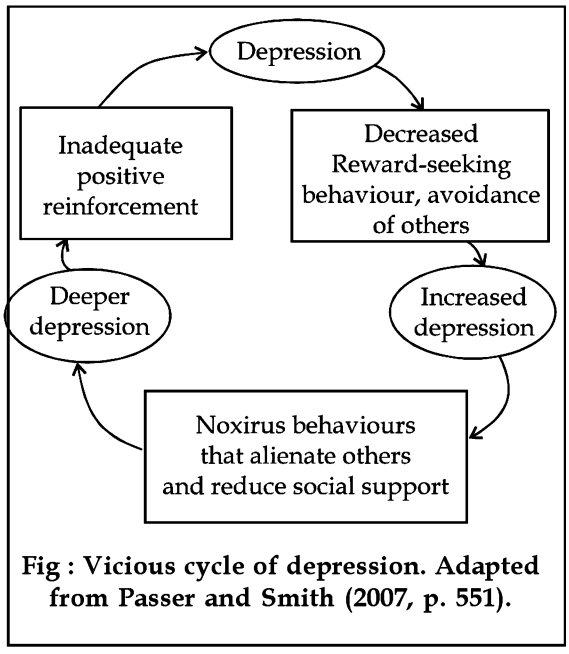

Fig : Vicious cycle of depression. Adapted from Passer and Smith (2007, p. 551).

• Causal factors in Bipolar disorders

Genetic factors have been found to have greater influence on bipolar disorder than depression. It is also reasoned that **norepinephrine** is low in depressed episodes, and higher than normal in manic episodes. **Lithium**, which is considered the most effective treatment for manic states, reduces norepinephrine activity in the brain. However, the exact nature of mania and the exact role of neurochemicals in it hasn't yet been known.

n Anxiety Disorders

Sigmund Freud believed that there are three kinds of anxiety : **moral**, **realistic** and **neurotic**. At some point of time, we all become anxious. However, anxiety disorder is a form of neurotic anxiety wherein the frequency and intensity of anxiety responses are out of proportion to the situations that trigger them (Passer and Smith, 2007). Anxiety disorder manifests itself in many forms like phobic disorder, generalized anxiety disorder (GAD), panic disorder, Obsessive-Compulsive disorder (OCD) and post-tramatic stress disorder (PTSD). In this section, I seek to discuss these disorders along with dominant views about factors that cause these disorders :

• Phobic disorder

Phobias are strong and irrational fears of certain objects or situations. People with phobia realize that their fear is irrational, yet are impotent in dealing with the fears. There are many common phobias like agoraphobia (fear of open spaces) and specific phobias like fear of spiders, snakes and cats.

Two dominant views about phobia are that of behaviourist school and psychoanalyst school. As early as 1920, John B. Watson had shown that fear can be conditioned. He and his

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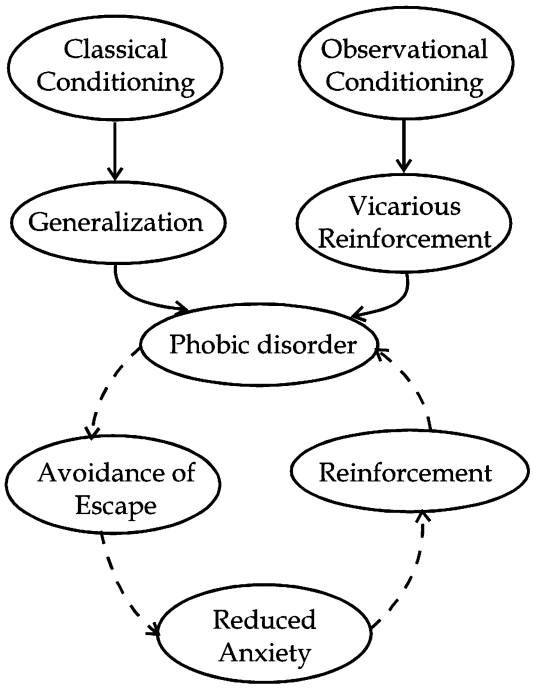
colleague classically conditioned a 11-month-old infant called **Little Albert** to a white rat. Later, Albert generalized his fear to fear of furry white objects like rabbit or Santa Claus mask. Along with classical conditioning, observational learning also leads to phobia. After watching a televised accident involving high-speed bikes, I have become phobic about sitting in bikes. This is inspite of the fact that I know the chances of accident are low when driven at average speed! This may be because I experienced the traumatic scene vicariously. Please note that the television event was seen by many but only I got the phobia. It is perhaps because I am biologically predisposed towards such intense fear.

Once phobia is learned through classical conditioning or observational learning, people are motivated to **avoid** or **escape** any phobia arousing situation. Avoidance and escape are **reinforced** by a reduction of anxiety i.e., operant conditioning reinforces phobia.



Another major explanation is the **Freudian** one. In one of Freud's most celebrated case studies, a 5-year old boy Hans suddenly developed a fear of horses. He was afraid that a horse may bite him. Freud explained this phobia in this way : the powerful horse represented Hans's father and the fear of being bitten symbolized Hans's unconscious fear of being castrated by his father for harbouring sexual desires for his mother.

• Generalized Anxiety Disorder (GAD)

GAD refers to a case where anxiety and worry are prolonged but are not focused on specific issue or occurrence. Rather, the anxiety is **free-floating**. Little is known about the causality of this disorder and most proposed explanations are lacking in some respects. According to Freud, when unacceptable impulses (existing in the unconscious) try to break through the defences, it leads to neurotic anxiety. If the defences aren't strong enough to control the anxiety, it leads to prolonged anxiety i.e. GAD. Social learning theorists have suggested that GAD is learned by observing the reactions of others by **modeling**. Cognitive theorists believe that a definite thought pattern characterized by **pessimism** and belief that negative events are **unpredictable** lead to GAD.

Some biological explanations have also been forwarded. It is suggested that some people are genetically predisposed to have a sensitive autonomic nervous system that overreacts to perceived threat, creating unnnecessarily high level of arousal. Over-reactivity of neurotransmitters like **GABA** may also be responsible for emotional responses that lead to GAD.

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• Obsessive - Compulsive Disorder (OCD)

Obsessions are repetitive and unwelcome thoughts that intrude into consciousness. **Compulsions** are repetitive behaviour or mental exercises that a person feels compelled to perform. Ignoring obsessions or failing to perform compulsions leads to anxiety, so much so that performing compulsive acts seem to reduce anxiety.

It must be noted that obsessions and compulsions aren't disorders of anxiety but are ways of handling anxiety. For example, **psychoanalysts** believe that obsessions are symbolically related to underlying impulses. These unacceptable urges are too unacceptable to be thought about, yet can't be repressed into the unconscious. Hence, they manifest themselves in the form of obsessive thoughts. For example, obsessive thoughts about dirt may be symbolic of one's dirty sexual impulses. Compulsive behaviour like washing hands frequently is a way of controlling the impulses.

Cognitive theorists argue that we people usually get repetitive but unwanted thoughts. In case of patients of OCD, these thoughts cannot be controlled and the repetition becomes chronic. In an attempt to dispel these thoughts, the OCD patient uses certain mental and behavioural strategies that lead to OCD. A physiological explanation has been suggested on the basis of findings that OCD patients have low levels of the neurotransmitter **serotonin**.

Once OCD occurs, it is reinforced by the obsessions and compulsions. Compulsive behaviour provides **negative reinforcement** by reducing anxiety. For example, if I get obsessive about cleanliness, it arouses **anxiety** in me. When I engage in compulsive behaviour i.e. washing my hands every now and then, it reduces anxiety and so the behaviour is reinvorced.

• Panic Disorder

Panic disorders are disorders wherein anxiety occurs suddenly and unpredictably and is much more intense than that of any other anxiety disorder. Panic attacks usually happen suddenly and without any visible reason. Panic attacks often lead to agoraphobia (fear of public places) because the victim often fears that she may get panic attacks in public places.

Explanations of cognitive theorists have been by far most conclusive about panic disorder. David Barlow (2002) reasons that panic attacks are triggered by exaggerated misinterpretations of normal bodily arousal relating to heart palpitations, dizziness and breathlessness. Basically, the victims of panic attack catastrophize bodily sensations and magnify the threat perceptions.

• Post-Traumatic Stress Disorders

PTSD is 'an anxiety disorder arising as a delayed and protracted response after experiencing or witnessing a traumatic event involving actual or threatened death or serious injury to self of others. It is characterized by intense fear, helplessness, or horror lasting more than four weeks, the traumatic event being persistently re-experienced in the form of distressing recollections, recurrent dreams, sensations of reliving the experience, hallucinations, or flashbacks, intense distress and physiological reactions in response to anything reminiscent of the traumatic event' (Oxford Dictionary of Psychology, 2006).

Undoubtedly, the stressful event acts as the

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precipitating factor in causing PTSD. The traumatic event can be rape, violence, combat situation, a natural disaster, or a serious accident. Today, it is generally accepted that PTSD is natural – especially among children and the old. However, the one question that remains unanswered is : why do some people develop PTSD while others who have experienced the same situation don't ? Some recent researches have shown that vulnerability to PTSD develops in childhood when one is exposed to violence or mental disorders. The way one copes with stressors (coping style) and personality type are also factors that affect the vulnerability to PTSD.

n Personality Disorders

Personality disorders are inflexible and long-term patterns of behaviour and thinking that lead to maladaptive ways in which one relates to social environment. As per the DSM definition, there are ten different types of personality disorders. There are different characteristics of these disorders but some common characteristics can be identified:

1. Personality disorders differ from other disorders discussed here in that these disorders begin in childhood and remain relatively unchanged till late in life. There is hardly any change in intensity or nature of the disorder.
2. They have maladaptive ways of thinking, feeling and behaving.
3. They have inappropriate emotional responses and impulse control.

There are ten types of personality disorders, which are discussed in short in the following table. These ten types can be divided into three clusters that capture commonalities of characteristics -

1. Dramatic/Impulsive Cluster : Antisocial, Histrionic, Nareissistic, Borderline.
2. Anxious/Fearful Cluster : Avoidant, Dependant, Obsessive-compulsive
3. Eccentric Cluster : Schizoid, Schizotypal, Paranoid.

Among the personality disorders, the most dangerous to society is the **antisocial personality disorder**. This has also received the maximum research interests. Hence, I will discuss this disorder, and its causal factors in detail.

n Antisocial Personality Disorders

Also called psychopaths and sociopaths, people with antisocial personality disorder seem to lack any conscience, due to which they are capable of doing acts that are considered socially deviant and morally unacceptable. Some famous examples are Charles Shobraj and Mithilesh Kumar Shrivastav, popularly called 'Natwarlal'. Some typical characteristics of people with antisocial personality disorders are :

1. They have a very weak conscience, if at all they have.
2. They exhibit little anxiety and guilt.
3. They are impulsive and can't delay gratification. Hence, they have short-term objectives and oriented towards getting pleasure.
4. They often appear very charming and innocent, and can effectively rationalize their inappropriate behaviour so that it appears reasonable (Passer and Smith, 2007).
5. They don't learn from punishments. The

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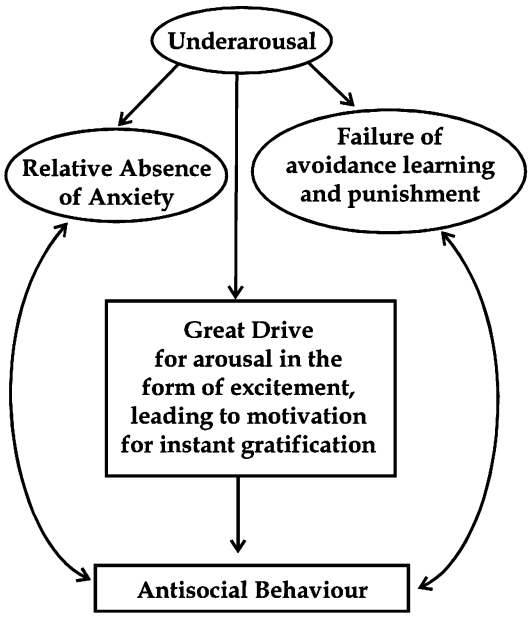
threat of punishment doesn't deter them from engaging in antisocial acts again and again.

• Causal Factors

Biological Explanations : Both twin studies and adoption studies have shown consistent results that point towards a genetic predisposition in antisocial personality disorder. But how can a lack of conscience be genetically inherited? Some researchers argue that psychopaths show a relative absence of anxiety and guilt. The disorder might be because of some dysfunction in brain structures that govern emotional arousal and anxiety responses. This results in a chronically underaroused state due to which (1) they don't become anxious, or feel guilty, (2) their avoidance learning is impaired and they don't learn from punishments and, (3) the underarousal drives them to seek for pleasure and excitement. The drive is so much that they go for instant, hedonic gratification.


Underarousal
Relative Absence of Anxiety
Failure of avoidance learning and punishment
Great Drive for arousal in the form of excitement, leading to motivation for instant gratification
Antisocial Behaviour

Psychological explanations :

Psychodynamic theorists argue that conscience develops when a superego develops. This superego is the result of proper socialization during childhood. The persons with antisocial personality disorder do not develop a well-defined superego. **Ego** tries to balance the demands of id and restraints of the superego. The demands of id dominate, resulting in impulsive and hedonic behaviour. Why could the superego not develop properly? The dominant explanation is : the psychic problems of phallic stage (sexually desiring the parent of opposite sex) are resolved by **identification** with parent of the same sex. But if the parent is not available for identification, or if the psychological distance from the parent is too much, there are problems in developing a strong superego.

Cognitive theorists argue that antisocial individuals consistently fail to anticipate the long-term negative consequences of their behaviour. Hence, incorrect cognitions and beliefs are at the root of antisocial behaviour of these people.

Social learning theorists argue that modeling may play an important role. It has been found that most psychopaths come from families where parents exhibit a high degree of aggression. Such parents may act as role models for aggressive behaviour and to disregard social norms. Deviant peers also can act as role models. However, these role models most probably contribute only to increase the vulnerability in childhood.

Behaviourist explanations are one of the dominant explanations of antisocial behaviour. These theorists argue that a conscience develops when one learns fears and avoidance responses.

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I avoid stealing behaviour because I fear that it may lead to punishment. Such avoidance learning is the basis of conscience. Unfortunately, these individuals are incapable of *conditioned fear responses* and hence, don't develop a conscience.

To prove this hypothesis, Adrian Paine and coworkers (1996) did a study in which male participants at the age of 15 had been subjected to a classical conditioning procedure in which a soft tone was used as conditioned stimulus and a loud, aversive tone as the unconditioned stimulus. Fear that was conditioned by this procedure was measured by the participants' skin conductance. After 14 years, a follow-up study was done on the (now 29 years old) participants. It was found that those who had a criminal record in the follow-up study had shown poorer fear conditioning fourteen years back than had those with no criminal record.

n Substance-Abuse Disorders

Substance abuse refers to a maladaptive use of a drug, leading to impairment of functioning or distress. **Substance abuse disorder** refers to a class of mental disorders when the problem of substance abuse becomes clinically significant. There are 11 groups of substances that can lead to substance abuse disorder (SAD), as per DSM-IV. This includes alcohol, amphetamines, caffeine, cannabis, cocaine, hallucinogens, inhalants, nicotine, opiates, phencyclidine, sedatives, hypnotics and anxiolytics.

Certain characteristic features of substance dependence are :

1. **Tolerance :** Drugs are used because of the desirable physiological response that they provide. However, with regular use, the body develops a tolerance towards the drug, necessitating greater dose of the drug for the same effect.
2. **Withdrawal** : If the supply of drugs is stopped, the body's response (which had become accustomed to the drug) is such that there is an extreme craning for the drug.
3. Persons suffering from substance-abuse disorders spend excess time on activities related to getting drugs and using drugs. Due to this, their social, occupational and family life are neglected.

Further, substance abuse disorders are a joint result of physiological dependence and psychological dependence. Physiological dependence refers to withdrawal symptoms i.e. the excessive dependence of the body on drugs. Psychological dependence on the other hand, refers to the strong craving for a drug because of its pleasurable effects.

• Causal Factors

Drugs, no doubt, lead to physiological changes but drug-abuse disorder, as such, is a combination of multiple factors. Let us study these in detail :

Biological causation : As you must have read in the chapter on motivation in basic psychology, the human body tries to maintain a **homeostasis.** There is a set point of hormones and neurotransmitters in human body. When you take drugs, the hormonal response and neurotransmitter secretion change. But this is momentary. On regular use, however, the set point changes. Suppose the set point for a neurotransmitter is X. Drug use increases the neurotransmitter secretion. To keep the set-point at X, the body tries to decrease the normal

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secretion of the neurotransmitter. This attempt to restore balance is called **compensating response** of the body. Due to compensatory response, the use of the drug in the same amount doesn't lead to any extra pleasure. (The pleasure comes when the level of neurotransmitter is more than X. But when regularly used, the level with drugs automatically readjusts to X). This phenomenon is basically **tolerance.** Due to tolerance, the individual has to take greater dose to have the same effect. This way, tolerance and compensatory response become a vicious circle and the individual has to increase the intake of drugs everytime.

Now, what happens when drug intake is suddenly stopped ? The present level of the neurotransmitter (in our example) is X with drug use. When drug use is stopped, the level of neurotransmitter abruptly falls much below the level X. Body's set point needs time to adjust. Owing to this, **withdrawal symptoms** happen. The individual is in a distress because at such low levels of hormones and neurotransmitters, she experiences extremely negative emotions.

Role of Learning : The setting in which drug is usually taken has a significant role to play in drug use. By classical conditioning, the environmental stimuli are conditioned to secretion of stronger compensatory responses. Hence, a strong dose of drug can be handled by the body. This conditioning also explains why certain settings increase the craving for drugs for addicts and for rehabilitated individuals.

Now consider a case when the same dose of drug is taken in an environment not similar to the environment where usually the drug is taken. The new environment can't act as a cue for stronger compensatory response. Hence, the body may not be able to tackle even the same dose. This leads to death. You must have heard about some celebrity or member of rock band die of **drug overdose.** Actually it is not overdose but regular dose in unfamiliar environment.

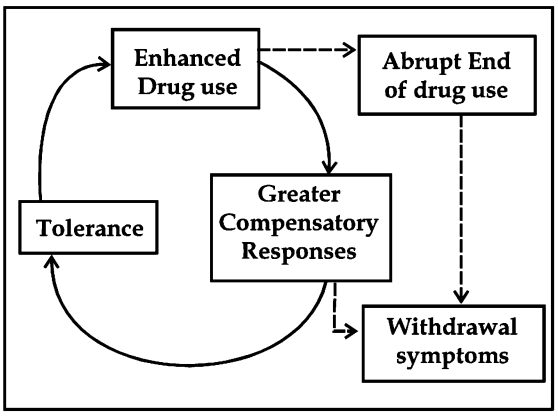

Fig. : Vicious circle of increasing dosage of drug intake

This is proved from a study by Shephard Siegel (1984). Siegel interviewed heroin-addicts who had experienced near-fatal overdoses. He found that in most cases, they hadn't taken a dose more than they normally do. Rather, they had injected a regular amount in an unfamiliar situation.

Other Explanations :

The psychoanalytic approach assumes that the main cause of addiction is an unconscious need to entertain and to enact various kinds of homosexual and perverse fantasies, while at the same time fearing social retribution for actually trying out the fantasies. Since drug use is a

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better substitute for masturbation to entertain these fantasies, the addicts prefer drugs to experience their perverse fantasies.

Cognitivists explain substance-abuse disorder in terms of certain core beliefs that are incorrect. The addict may not be even aware of the core beliefs (e.g., "I am useless"). This triggers a system of addictive beliefs (imagined benefits of substance use) and consequently craning.

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2

Therapeutic Approaches

- Psychoanalysis and Psychodynamic theories
- Cognitive therapies
- Client-centred therapy
- Behavioural therapies
- Indigeneous therapies : Yoga and Meditation
- Biofeedback
- Fostering Mental Health

n Psychoanalysis and Psychodynamic Theories

Psychoanalysis is a form of insight therapy which comes from the works of Sigmund Freud. Psychoanalysis aims to give clients self-knowledge (i.e. insight) into the contents of their unconscious mind. Freud believed that there is a hidden reservoir in our minds that is filled with primitive urges and desires, conflictual memories and repressed thoughts. Most forms of maladaptive behaviour are an expression of these unconscious processes expressed through defence mechanisms.

Freud developed his theory as a result of case studies of patients he met in the course of his private practice. He found that he could help these people by just getting them to recall and relive the experiences that have been repressed. Freud was particularly interested in finding significant childhood experiences because he believed that traumatic experiences of the childhood are tough for the growing mind to deal with. So children bury these in the unconscious.

Tools of Psychoanalysis

The goal of psychoanalysis is to help the client uncover various unconscious, conflict arousing memories. Since these memories are unconscious, even the client is not aware of this. Hence, the therapist has to use certain tools to uncover these repressed thoughts. One such tool is **free association.** In free association, clients are asked to relax on a couch and asked to freely express whatever thoughts and feelings come to their minds. The psychoanalyst doesn't sit facing the client; rather he/she sits out of sight of the client so that the client's thought processes aren't interrupted by his presence. The client is encouraged to talk about anything that she wishes to. What the client speaks may sound meaningless and haphazard. But the meaningless and unrelated thoughts provide symbolic cues to understand the contents of the unconscious.

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Another important therapeutic tool used by psychoanalysts is **dream analysis.** Dreams are, according to Freud, the *royal road* to the unconscious. He believed that dreams are a mechanism of wish-fulfillment; dreams provide a channel to live out and experience one's hidden impulses and fantasies. Even in dreams, such desires can produce considerable anxiety. Yet, dreams don't explicitly show unconscious desires. Hence, dreams are symbolic of unconscious desires. The latent content of these dreams need to be analyzed and interpreted to understand the unconscious.

Resistance and Transference

The patient shows certain unconsciously motivated behaviours in the course of psychoanalysis. One of these behaviours is **resistance.** In the course of therapy, the client has to relive her emotional conflicts and unconscious memories that produce anxiety. It is necessary for getting insight that the client face such conflictual emotions. During this process, the client may show **resistance,** an attempt to subvert or hinder the therapy in order to avoid facing the anxiety-provoking thoughts. For example, the client may state that she can't come to the therapeutic session because of a common cold or headache. Even the client doesn't know that she is resorting to these behaviours because of resistance.

There are many types of resistance that the client shows during therapy. Freud believed that a turning point in the therapy comes when the client shows a type of resistance called **transference.** In transference, the client expresses thoughts and feelings towards the therapist that are representative of feelings towards someone else. For example, suppose a woman had unconscious desires to have sex with her brother-in-law; she had emotions and feelings towards her brother-in-law and desired that her sister would die so that she could possess her sister's husband for herself. Such amoral feelings create anxiety; in her case it was repressed into the unconscious. Now during therapy, she has to face these feelings and thoughts. Finding these feelings towards her brother-in-law anxiety provoking, she 'transfers' the feelings towards the therapist. Whatever be the nature of original feelings (love, hate or dependence), she transfers these towards a substitute figure, who usually is the therapist.

Freud calls transference a turning point of psychoanalysis because the patient no longer is in denial of powerful emotional urges. These urges have been recovered from the unconscious. The woman in our example may flirt with the therapist, or seduce him to possess him physically. Now the only job that remains is interpretation of these feelings and thoughts in order to get insight.

Other Psychodynamic Therapies

Classical psychoanalysis is a very time-consuming and costly process. It may take years for the analyst to uncover the hidden, unconscious thoughts. Usually, the client is in need of immediate help. Hence, modern practitioners of psychodynamic therapy try to make the process brief and take an active role in the therapy. Rather than waiting for the client to get her own insight, these analysts provide their own interpretations in early stages of the therapeutic process. Also, rather than wait for transference to occur, they encourage *role playing* in order to help the client experience her

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unconscious motives.

One popular psychodynamic therapy is the **interpersonal therapy**, in which focus is almost exclusively on the client's current relationship with significant others. This therapy is highly structured and usually takes 15 to 20 sessions. The goal of this therapy is to resolve role disputes and interpersonal issues such as marital conflict, death of a closed one, a change in relationships etc.

Psychodynamic Therapy : An evaluation

Classical psychoanalysis has been heavily criticized for a number of reasons, such as :

1. It is relatively time-consuming and expensive.
2. It is based on a questionable approach to human nature. This approach has no scientific basis.
3. It neglects the client's immediate needs in its obsession with childhood and experiences of the remote past.
4. There is an inadequate proof of its effectiveness. Some studies conducted on the effectiveness of psychoanalysis haven't given encouraging results (See Wallerstein, 1989).

Yet, many people who have undergone psychoanalysis have opined that the therapy helps them get an insight into their personality and provides them relief from inner conflict.

Modern psychodynamic therapies have been found to be quite effective in relation to classical psychophysics. For instance, interpersonal therapy has been found to be effective for several disorders, particularly depression.

n Cognitive Therapies

Cognitive psychologists believe that maladaptive behaviour is the result of irrational beliefs and negative thoughts. Hence, mental health can be fostered by teaching people to more accurately think about their goals and behaviour. Cognitive therapies, typically try to restructure the client's cognitions. But before dealing with that, let us analyze the cognitive point of view in detail.

The Cognitive Point of View

There are many typical cognitive processes and thinking patterns that are responsible for different types of disorders. Rosenhan and Seligman (1989) divide these processes into two categories :

1. Short-term conscious cognitive processes.
2. Long-term and unconscious cognitive processes.

Short-term cognitive processes :

Three primary short-term cognitive processes which, if inaccurate, lead to mental disorders are **expectations, appraisals** and **attributions.** Expectations refer to the expectancy that a behaviour would lead to a desirable outcome. After Bandura (1977), we can in fact say that there are two kinds of expectations a person can have : *outcome* expectations and *efficacy* expectations. Negative outcome and efficacy expectations have been linked to phobias and anxiety (Lang, 1967). Individuals who are anxious or phobic have incorrect cognitions in the sense that they expect something undesirable to happen.

Appraisals are evaluations about various events and behaviours of self. These self-evaluations are not always obvious and

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sometimes occur automatically. Beck (1964) has outlined many assumptions that predispose a person to negative appraisals :

1. To be happy, I have to be successful.
2. To be happy, I must be accepted by others at all times.
3. My value as a person depends on how others evaluate me.

Beck argues that when appraisals are based on these assumptions, they are bound to be negative, causing extreme sadness and hopelessness.

Attributions are our concept about why things happen to us. For example, if a student fails in the exam, whom does she blame for the failure ? If she blames the teacher, it is an **external attribution** but if she blames herself it is an **internal attribution**. There are three dimensions of attributions :

1. External-internal
2. Stable-unstable
3. Global-specific

A *stable* cause is one that is maintained over time. For example, if the student thinks that she will never be able to get good marks, she is making a stable attribution; but if she believes that not studying well for this exam led to failure, the attribution is unstable. *Global* attributions are displayed across situations whereas specific attributions are specific to a task. If the student thinks that she is a loser and she won't be able to do anything in life because she failed a psychology exam, it is global attribution.

Cognitive psychologists state that the attribution style determines whether anyone is prone to certain disorders like depression. The clinically deprived make internal, stable and global attributions. If there is extreme cold, they blame themselves for it. If Barack Obama dies, they blame themselves for the bad news.

Long-term Cognitive Processes :

We people tend to have some core beliefs based on hypothetical constructs. Ellis (1962) argues that psychological disorders result when these core beliefs are irrational. Usually, we are not conscious of these core beliefs; hence they are unconscious processes that affect our short-term expectations, appraisals and attributions.

How do core beliefs lead to maladaptive behaviour ? Ellis forwards the **ABC Model** to explain this. He states that A is an activating event which is unpleasant and bothersome. There are consequences in the form of negative emotions. Most people believe that the emotional consequences (C) are a direct result of the event (A); however, there is an intermediate step called B which represents the beliefs one holds about the event. Irrational beliefs in the second step (B) actually lead to such emotional consequences. For example, if a person is phobic to dogs, she thinks that she becomes anxious (emotional consequence C) when she confronts a dog (event A). Actually, there are irrational beliefs (B) that are unconscious and lead to C.

Rational-Emotive Therapy

The rational-emotive therapy forwarded by Ellis is based on the idea that to change maladaptive behaviour, we need to change incorrect cognitions. Hence, while he explains disorders using the ABC model, he proposes that disorders can be treated using the ABCD models where D stands for the process of disputing and changing B.

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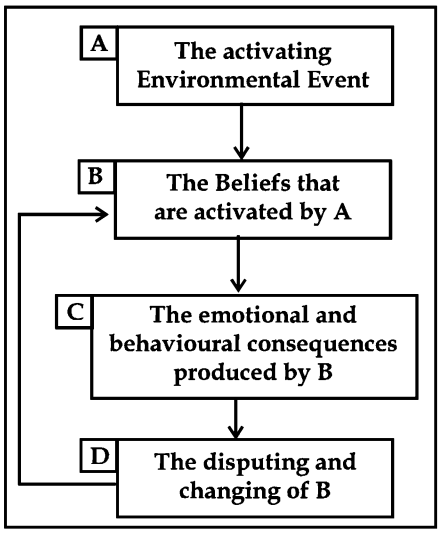


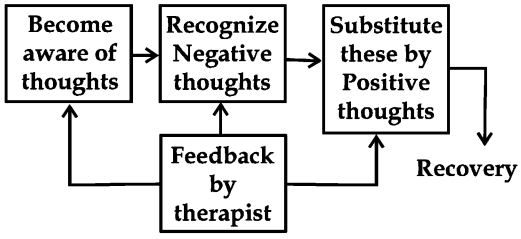
Fig. ABCD Model of Ellis. Adapted from Passer and Smith (2007)

In rational-emotive therapy (RET), the therapist acts as cross-examiner of irrational beliefs of the client. The therapist is an active part of the therapy, and aggressively confronts, the client about her irrational beliefs. Ultimately, it is cognitive restructuring : the therapist introduces the client to commonly held irrational beliefs and then trains her by aggressive confrontation to change her irrational beliefs.

Beck's Cognitive Therapy

Although all forms of cognitive therapy concentrate on cognitive restructuring, not all treatments are as direct and confrontational as rational-emotive therapy. In Aaron Beck's cognitive therapy, the therapist is suggestive, helping the client discover her own unique kinds of faulty beliefs, while the task of identification of irrational belief is with the client. In a sense, the clients are made to act as psychological detectives. Clients are asked to note their automatic thoughts and emotions in a notebook and then write rational responses to such thoughts and emotions. It is when the client discovers the contradictions that she can be said to have successfully gone through the therapy. Beck believed that a successful client of his therapy passes through four stages :

1. Become aware of what she is thinking
2. Recognize what thoughts are inaccurate
3. Substitute accurate for inaccurate judgments
4. Take feedback from the therapist to inform her where her changes are correct



Cognitive Therapies : An Evaluation

Rational Emotive Therapy (RET) has been found to be useful in reducing disorders such as test anxiety and speech anxiety quite effectively. Researchers have also found that RET is quite effective for depressive disorders. However, it seems to be most effective in helping generally healthy people to cope with everyday stress and prevent them from developing clinical anxiety or depression.

Beck's therapy seems to be extremely effective in alleviating many different kinds of disorders. Its effect in the case of depression is comparable to drug treatment, and indeed often better. Moreover, it has superior long-term benefits : relapse chances in the case of drug addiction are low in case of Beck's therapy. Beck's therapy has shown promising results in the treatment of

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certain personality disorders and substance-abuse disorders also.

n Client-Centred Therapy

Client-centred therapy is the most popular humanistic therapy. Carl Rogers developed this therapy in reaction to the psychoanalytic method of treatment. He reasoned that in the therapy process, most important element is the *therapist-client relationship*. It is not the therapist, but the client who ultimately holds the key to psychological health and well-being. Hence, therapy should be client-centred; the role of the therapist is to provide a therapeutic environment that fosters self-exploration and personal growth.

The Idea

Before getting into the nature and assumptions of client-centred therapy, it is important to understand Rogers' view of abnormality. Rogers believed that most psychological problems originate from **incongruence** between self-perceptions and experience. The self, according to him, refers to an organized, consistent set of perceptions and beliefs about oneself. Any experience which is inconsistent with our self-concept evokes anxiety. Well-adjusted people respond to the anxiety adaptively by modifying the self-concept. But individuals with abnormality have rigid and inflexible self-concepts, owing to which they are less open to experiences and hence are maladjusted.

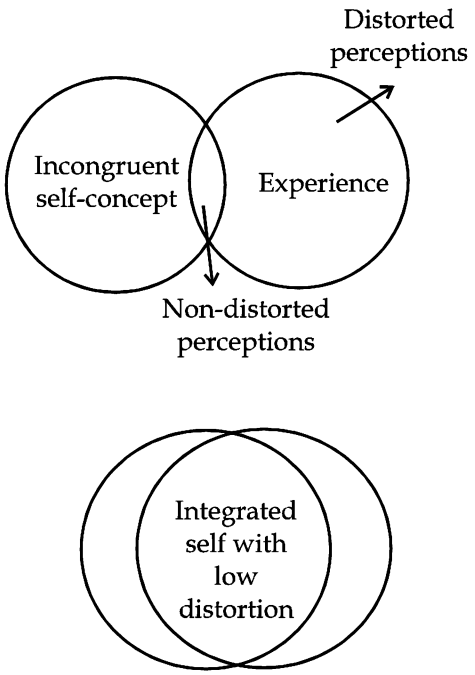

Fig. : Degree of congruence between self concept and experience; Adapted by Passer and Smith (2007)

The Therapy

Based on his research and experiences as a therapist, Rogers identified three attributes of a therapist in client-centred therapy :

1. **Unconditioned Positive Regard :** We humans have an ingrained need for positive regard (i.e., approval, love and companionship) of significant others in our life. But these significant others (father, mother, siblings, friends etc.) attach *conditions of worth* when giving positive regard, that is, you are positively regarded only if you act and think in certain ways. Such conditioned positive regard becomes problematic when the ways in which we are supposed to behave are incongruent to our true inner feelings.

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Hence, Rogers argues that the therapist should show conditioned positive regard therapy. The therapist should accept the client, without judgment or evaluation. The therapist trusts that the client has the ability to work through her problems. This is also the reason why the therapy is non-directive, that is, the therapist doesn't offer advice or guidance.

2. **Empathy** is the willingness and ability to take on the client's perspective and view the world from the client's perspective. Not only this, the therapist communicates to the client that he empathetically feels about her by reflecting back to the client what the client says in their conversation.
3. **Genuineness** is also an important attribute of the therapist. The therapist must be open enough to express her own feelings honestly, whether the feelings are positive or negative. You may wonder how the therapist can show unconditioned positive regard, still express negative feelings? This seems contradictory, but is not necessarily so. It is the skill of the therapist to accept the client even while expressing displeasure with the client's behaviour. For example, the therapist may observe, "I feel frustrated that you did not give the exams because I want things to work out for you".

Roger believed that these three attributes of the therapist creates a climate in which the client feels free to explore basic attitudes and beliefs without fear of being rejected or judged. This climate facilitates the client's innate potentialities to explore her feelings and strive for personal growth.

Client-Centred Therapy : An Evaluation

Client-centred therapy has often been criticized for the lack of any systematized model of human behaviour. The way that Rogers believes a therapy should progress, some critics fear that even a layman can become the therapist. That is exactly what Rogers believed! The therapy is similar to the way a very close friend of yours behaves with you. Yet, many skills are necessary to become a therapist in Rogerian therapy. Not every stranger can behave with you the way your best friend does.

Research on client-centred therapy, chiefly involving clients with mild problems, have shown encouraging results (e.g., Rogers and Dymond, 1954). However, a later trial of this therapy by Rogers and his colleagues (1967) proved disapproving many concepts introduced by client-centred therapy (such as importance of therapist empathy, human potential for self-direction, motivation to search for meaning in life etc.) have deeply influenced contemporary views on psychotherapy.

n Behaviour Therapies

Psychodynamic, humanistic and cognitive therapy all are based on the idea that disorders are due to inner dynamics. Hence, all these types of therapies focus on insight. Behaviour therapies are radically different, in that they believe that maladaptive behaviours aren't symptoms of inner disorder; rather they are the disorders; maladaptive behaviours are learnt very much the same way normal behaviours are - on the principles of classical conditioning, operant conditioning and modeling. Hence,

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therapy should focus on changing these maladaptive behaviours using the principles of behavioural approach.

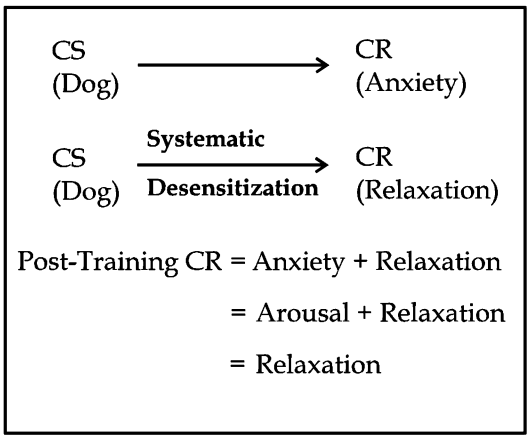
Classical conditioning is one in which a conditioned stimulus (CS) is paired with an unconditioned stimulus (UCS). Due to this, the CS starts eliciting response (conditional response : CR) that is otherwise omitted in response to the unconditioned stimulus. In therapies, this principles is used either to decondition (i.e. reverse maladaptive behaviours that result due to classical conditioning) or to condition aversive emotional response to some stimuli (for eg. condition avoidance in response to stimuli such alcohol for alcoholics, children for pedophiles). Most common classical conditioning approaches are systematic desensitization, implosive therapy and flooding, and aversion therapy. *Operant conditioning* refers to conditioning a behaviour that is emitted more often when rewarded and less often when punished. Many positive-reinforcement techniques and punishment techniques are based on this. *Modeling* is used in techniques like assertive therapy and social skills training. Let us discuss above mentioned therapies in greater detail :

1. Systematic Desensitization :

This is the most popular behavioural therapy used in the treatment of phobias and other anxiety-related disorders. Developed by Wolpe, it uses a procedure called *counter conditioning*, in which a new response incompatible with anxiety is conditioned to an anxiety arousing CS. The new response usually is relaxation. The logic is that one can not be anxious and relaxed at the same time. For example, suppose an individual get anxious on approaching a dog (she suffers from a phobia). That means, dog is a CS that elicits anxiety as a CR. If dog as a CS is paired with relaxation as CR, anxiety as a CR fails; all because one can't be anxious and relaxed at the same time.

A desensitization training typically passes through four stages :

(a) Interview
(b) Training in Relaxation
(c) Construction of anxiety hierarchies
(d) Desensitization proper



The therapy starts with an interview and a few tests to assess the type of, and nature of anxiety. The prime purpose here is to determine the sources of anxiety i.e. CS that lead to anxiety. Then the client is trained in skills of voluntary muscle relaxation. A *stimulus hierarchy* is then constructed, consisting of some 10 to 20 scenes that have a gradient from being low-anxiety provoking stimulus to high-anxiety provoking stimulus. For example, suppose a girl is afraid of frogs. Frogs are placed at different distances in every scene with even a

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scene in which a frog is placed on the girl's lap. After this starts the desensitization proper. The client has to move from the bottom of the hierarchy (low-anxiety producing stimuli) to the top (high-anxiety producing stimuli). In every step, relaxation is taught to substitute anxiety as a CR. As the relaxation becomes strong enough to counter anxiety at one stage, the client moves on to the next stage in the hierarchy.

2. Implosive therapy and Flooding :

While systematic desensitization tries counter-conditioning (i.e. conditioning an incompatible CR to counter the original CR), there are other techniques that can uncondition the original CR. These techniques are based on the concept of extinction. If a CS is not paired with an UCS for a long time, it leads to extinction.

What happens in the case of phobias ? Usually, phobia happens due to conditioning of the object of phobia (say a frog) with an unconditioned stimulus (UCS). After that, even in the absence of UCS, the CS (frog) leads to CR (anxiety). Why doesn't extinction take place ? Because, the CR (anxiety) motives the individual to avoid the frog. Avoidance leads to reduction of fear and hence avoidance becomes an operant conditioned response that is reinforced by a reduction of fear.

Phobia = Classical conditioning + Operant Conditioning

= Fear of an object + Reinforcement of the fear by avoidance

Avoidance behaviour is difficult to extinguish because one never gets to realize that the conditioned stimulus (frog) is no longer paired with the UCS, the real anxiety-causing stimulus.

Implosive therapy is based on an approach of extinction. In order for extinction to occur, it uses the following strategies :

1. **Flooding** of CS without UCS so that the strength of conditioning decreases.
2. Preventing the client from avoiding or escaping the stimulus.

Implosive therapy has been found to be quite effective in the treatment of phobias and certain anxiety-related disorders. However, critics remain concerned that initially, such flooding leads to intense anxiety and fear in the clients. Systematic desensitization is sometimes preferred over implosive therapy, as it produces far less anxiety for the client. However, implosive therapy provides better results in briefer course of the therapy.

3. Aversion therapy :

Suppose some pedophile offenders (child molesters) are brought up to you and you are asked to rehabilitate them, what do you do ? You know that if left without any supervision, they may be dangerous to children in the society. So, the only solution is to treat them for their sick, perverse desire for children.

Aversion therapy does exactly the opposite of what implosive therapy does. An undesirable, noxious stimuli (UCS) is paired with something you want the individual to avoid (CS) so that the CS also becomes a noxious stimuli. For example, in case of pedophiles, show them pictures of children and condition it with electric

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shock. Make an alcoholic drink alcohol while injecting a mausea-arousing drug. The nausea is paired with alcohol and the individual avoids drinking alcohol.

A major shortcoming of this therapy is that the results of treatment often don't get generalized from treatment conditions to the real world. A reason for this may be expectancy : the client understands that children she is sexually attracted to in real life don't give shock if molested. Hence, *discrimination* takes place between the stimuli in treatment conditions and real-life conditions. Some experts believe that if aversive therapy is part of a larger treatment program that makes use of multiple approaches, it is more effective.

4. Token Economy :

This is based on the concepts of operant conditioning. This training has been of immense use in changing behaviours of hospitalized patients, specifically schizophrenic patients. A token is paid to a patient for performance of desired behaviour. This token can be used by the patient for a wide range of reinforcers, such as a private room, opportunity to watch a movie, recreational facilities. Token economy has proved to be quite effective in treating even the most challenging patients. In a study spanning four years, Paul and Lentz (1977) studied severely disturbed schizophrenic patients. An experimental group was provided token economy while a control group wasn't. It was found that after the behavioural training program about 98% of the experimental group had been discharged from hospital. In contrast, only 45% of the control group were discharged.

5. Punishment :

Punishment is usually avoided as a therapy technique as it has potential negative side effects. It can be used as a measure of last resort, when less painful alternatives are not available. Even then, the consent of the patient or a guardian (in case the patient is a minor or mentally incompetent to give consent) is needed.

Punishment has been found to be quite effective in treating severely disturbed autistic children. Autistic children often indulge in repetitive, self-destructive behaviour such as banging their head on sharp objects or tear pieces of flesh from their body. Lovaas (1977), a pioneer in the treatment of operant conditioning techniques, had conducted a training in which a severely disturbed girl (who banged her head against objects) was given electric shocks everytime she indulged in self-destructive behaviour. In 15 shocks, her self-destructive behaviour was eliminated.

6. Modeling techniques

In social skill training, clients learn new skills by observing and imitating a model. This has been effectively used in inculcating social skills among populations, ranging from those who fear to talk to girls, to delinquents who have to resist peer pressure to severely disturbed schizophrenic patients.

Another modeling technique is the *assertiveness training* in which the client is asked to try out new behaviour keeping a person who is more assertive as role model. Role Model is used in assertive therapy to develop such skills.

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n Indigenous Therapies

All the therapies we have discussed till now are based on theoretical constructs of psychology and medical science. However, there are certain traditional exercises and practices that have therapeutic value. Some of the popular traditional therapies have been indigenously developed and used in eastern traditions, for instance yoga, meditation and reiki.

Indigenous therapies have been in use for centuries in our tradition. Their therapeutic value has been documented in many documents. For example, Patanjali had forwarded various constructs of Yoga. Since him, many students of yoga have benefited from its therapeutic value. The real interest for indigenous therapies in scientific circles of psychology came when it was found that meditation and yoga lead to certain physiological changes that foster mental health and have the ability to help deal with mental disorders.

It has been found from electroencephalogram (EEG) studies that numerous brain-waves exist, each wave active in a different state of consciousness. Alpha waves are active when the individual experiences tranquility. Beta waves are of high frequency and are active when the individual undertakes cognitive tasks. It is usually accompanied by tension. Delta waves and theta waves are active when the individual is asleep. EEG studies have shown that meditation and yoga practitioners are able to control their brain waves. Alpha waves noticeably increase during meditation. The implications of these findings are profound. It means that meditation and yoga take you to a different state of consciousness where you experience tranquility. Can there be a better, and cheaper technique to relaxation than these traditional therapies? Not only the brain, indigenous therapies also influence other physiological functions. The rate of metabolism lowers (as evidences from the fact that oxygen consumption decreases and carbon dioxide is eliminated) and there is a decrease in blood lactate, a chemical that is related to stress.

Yoga

Yoga means union. It is based on the ancient Indian philosophy of uniting the individual spirit with universal spirit. Yoga is touted to be a state of superconsciousness in our traditional literature. In this section, we will concentrate on therapeutic applications of yoga.

Ramamurthi (1977) has studied yogis under states of relaxation, concentration and meditation. He found changes in the brain which had a beneficial effect on the activity of nervous system. These changes also affected the way the heart, the lungs, the digestive system as well as the endocrine system function. These physiological changes, contends Ramamurthi, foster positive health.

An obvious utility of yoga is in tackling stress and fostering relaxation. Dr. Cabot-Zinn of University of Massachussets had designed Stress Reduction and Relaxation Programme (SRRP) based on Hatha yoga around twenty years back. A slew of peer-reviewed journal papers have verified the therapeutic usage of this program, and other such programs based on yoga.

Relaxation is also linked to anxiety. A relaxed person can't be anxious at the same time. Does it mean that yoga affects anxiety also ? Many

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studies have shown that yoga is an effective tool to reduce anxiety. For instance, after the disastrous tsunami struck South India in 2006, many survivors suffered from Post Traumatic Stress Disorder (PTSD). Dr. Gerbarg who teaches psychiatry at New York Medical College, conducted a study on these victims in which three groups were taken. One group of 60 victims were given 4-day yoga training. Another group of 60 was given 4-day yoga and counselling. A third group of 60 acted as control. The researcher found that yoga had significant effect on PTSD. Counselling didn't seem to have as substantial effect as yoga as the results for first two groups were similar. Other studies have explored the therapeutic value of controlled breathing in yoga. I. Sharma and Agnihotri (1982) had investigated the effect of controlled breathing on 20 persons who were diagnosed high on anxiety. After 4 weeks of practice there was definite reduction in anxiety in 10 out of the 20 patients.

The benefits of Yoga in handling stress, anxiety, depression and hypertension have been verified. But do you know that yoga helps treat physiological disorders such as cancer, diabetes, and heart diseases also ? Take, for instance, Divakar's (1982) study of diabetic patients. He found that in a majority of cases, there was a fall of blood sugar level among these patients after practising yoga for a specific period. Nagarathna and Nagendra (1981) have given similar reports.

Transcendental Meditation

Almost all forms of meditation involve an attempt to direct the focus of attention away from the world of stimuli (i.e., outside world) by using intense concentration. In the case of transcendental meditation (TM), subjects sit quietly in comfortable position with their eyes closed. They exclusively concentrate on the sound of a mantra, that they repeat to themselves silently. Participants are discouraged from thinking logically or concentrate on any specific idea; rather, the mind should be allowed to experience freely the thoughts elicited by the mantra. During TM, the mind 'transcends' normal consciousness to arrive at a state of nothingness.

EEG activity has shown that brain-wave activity during meditation resemble that of a drowsy state superficially. The difference lies in the fact that during meditation, one is not inattentive. Rather the attention is inwardly directed. The decrease in body metabolism is greater in meditation than in a drowsy state or deep sleep. Hence, Wallace (1970) is justified in calling meditation a unique "fourth state of consciousness".

There are significant health changes due to TM. For example, Bharadwaj, Upadhyaya and Gaur (1979) have examined the effects of TM, drugs and placebo on three groups of neurotic patients. Their anxiety level was assessed before and after the treatments. The conclusion was that maximum reduction in total anxiety was in the TM group followed by the drug treatment group. Hence, TM seems to be more effective than drugs in case of anxiety. On top of that, drugs like Prozac (used to treat anxiety) are costlier and have side-effects.

TM also seems to change one's personality. For instance, Schwartz and Coleman (1973)

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observed that practitioners of meditation are less anxious and less neurotic when measured by Eysenck's Personality inventory. They are also low on aggression.

Criticisms :

It seems that all forms of yoga don't have the same benefit on all people. This is the reason why many studies on yoga have got inconclusive results. If you conduct a test on psychologically heterogenous population and the results show that yoga has beneficial effect on some while no effect on others, it means that yogic practice doesn't benefit all people alike.

In a review article, I. Sharma and Agnihotri (1982) make the revelation that yoga and TM have side-effects also. There are possibilities of subjects developing dissociative states, depersonalization and derealization experiences. Anxiety may increase in some individuals due to meditation because during meditation the individual gets to confront emotionally charged material. These emotionally charged memories may overwhelm the individual. Hence I. Sharma and Agnihotri have warned against the indiscriminate use of yoga.

n Biofeedback

Biofeedback is essentially a type of behavioural therapy. The development of sensitive electronic equipments that could tell us about our physiological responses has enabled us to take feedback from our biological system. This feedback helps us to use operant learning procedures to voluntarily control our physiological processes, such as heart rate, penile erection, blood pressure etc. Feedback acts as the knowledge of results (KR), important for operant learning.

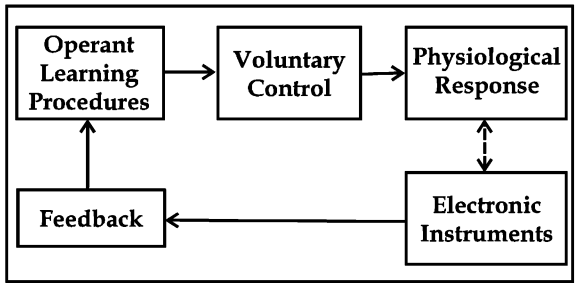

Fig : Mechanism of biofeedback

To illustrate biofeedback, some specific examples will be taken here. Here, I will borrow heavily from results of a study conducted by H. Mishra and S.K. Kiran Kumar (1993).

Secondary Sexual Impotence

Primary sexual impotence is one where penile erection does not happen. Biofeedback can not be used in this case as the individual can't make physiological changes (penile erection) on sexual arousal in any way. In secondary sexual impotence, penile erection is present but the clients wouldn't maintain it for sufficient period to have vaginal penetration and satisfactory intercourse. The feedback procedure in this case typically follows the following steps :

1. Relaxation training
2. An electronic instrument is arranged to take biofeedback. Plethysmograph is an instrument that records penile (erection) responses. It can be used to take biofeedback.
3. The client is presented with pictures of nude females of his choice. He is asked to fantasize and relive the sexual intercourse and sex play when viewing the pictures. This he has

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to do for a 45 minute session. The pictures are regularly changed to avoid satiation.

4. After 45 minutes, the results of plethysmograph are taken. The graph between maintenance of penile volume and duration of erection is provided to the client for analysis, so that he could make informed attempts in the next session.

In the study by Misra and Kiran Kumar, it was found that plethysmographic feedback along with relaxation can improve penile response in about 27 sessions. Relaxation is important because it reduces any anxiety one has doing the intercourse process. Anxiety affects performance and penile volume. If you are unable to consummate your conjugal life, I recommend you try out biofeedback. Medications only provide temporary help.

Enuresis

Enuresis is a disorder in which if you drink water beyond a satiation level, your bladder can not withstand the tension and wet your pants. In many cases of enuresis, the patient wets the bed daily. It becomes tough to withstand the bladder pressure for even 2-3 minutes from the time of feeling the tension.

Biofeedback for enuresis typically follows the following steps :

1. The patient drinks water beyond satiation level.
2. The time when bladder tension is felt is recorded.
3. The patient tries to withhold the pressure till maximum tension builds up and the releases the same. All this time, the time taken to release is recorded.
4. The time interval between pressure formation and release becomes the bladder tension feedback. This is monitored in every trial.

In every trial, effort is made to lengthen the interval of withholding pressure. A twice-a-day practice, once in the forenoon and once in the afternoon are recommended. Mishra and Kiran Kumar (1993) had worked with a patient with enuresis. This patient had been suffering from the problem for the past 13 years. He had earlier been treated with drugs, psychotherapy and behaviour therapy, but to no avail. He used to wet his bed daily at night one or two times. In the biofeedback exercise, this enuretic patient took 272 days to achieve complete dry nights. It is quite an encouraging result, given that other treatments didn't work in the past 13 years.

Phobia

Biofeedback can be coupled with systematic desensitization therapy in treating phobia. The biofeedback instrument used here is a galvanometer that measures Galvanic Skin Response (GSR). Changes in GSR show the pattern of anxiety response to phobia-arousing stimuli. A biofeedback procedure to treat phobia can follow the following steps :

1. Construction of an anxiety hierarchy.
2. Client education, in which the client is educated about how deflection in the galvanometer indicates physiological changes.
3. Presentation of items from the anxiety hierarchy for visualization. All this time the client monitors GSR changes through visual and auditory modalities.

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Chronic Anxiety and Tension

In a series of pioneering studies on brain-wave activity, Dr. Kamiya found that conscious control of alpha waves is possible. Biofeedback can be used to get feedback about alpha wave activity and muscle tension, and then voluntarily trying to change alpha wave activity. This technique is also referred to as "electronic yoga" because it seeks to do the same thing that yoga and meditation do, making use of electronic feedback of EEG and other instruments. This use of biofeedback has been particularly helpful in overcoming chronic anxiety and tension.

Biofeedback : An Appraisal

As already seen, biofeedback is a modern therapeutic tool. But what is its efficacy ? Some concerns regarding biofeedback are :

1. The effects of biofeedback procedures are generally small.
2. Many of the effects of biofeedback procedures do not generalize to situations outside the laboratory, where feedback devices are not present.
3. It is quite a costly method, involving costly electronic equipments for feedback.

n Fostering Mental Health

In most of the therapies we have discussed in this chapter, the focus has been on treating a mental disorder. An alternative is to prevent the incidence of mental disorder. Hence, many psychologists – especially community mental health workers and school psychologists – are now concentrating on attempts to foster mental health. In this section, we will discuss certain interventions to foster mental health in children and then move on to certain general psychological interventions.

Interventions to foster mental health in children

The most important aspect of fostering mental health is to help the individual develop a correct frame of reference in childhood.

1. **Nutrition** : Sufficient and healthy nutritious food is not only necessary for physical health but also for mental health. Many studies on deprived groups in India has shown that malnutrition is linked with impaired cognitive development, and with mental ill-health. Agarwal et al. (1987) have found from a large scale study on 6-8 years old rural children in Varanasi that severity of malnutrition is proportional to impairment of intelligence, verbal reasoning, short term memory and perceptual and spatial skills.
2. **Rich Environment** : The human child is in need of a rich environment for stimulation of its mental faculties, in order to develop a strong self-concept. Hence, schools should try to provide an intellectual environment rich in problem-solving tasks and logical reasoning.
3. **Realistic aspirations** : Those with unrealistic goals often face frustration in life. They also tend to develop a rigid self-concept. Often, failure is followed by incorrect attributions and appraisals. For example, many students with poor mental health attribute success to external factors and failure to internal factors.

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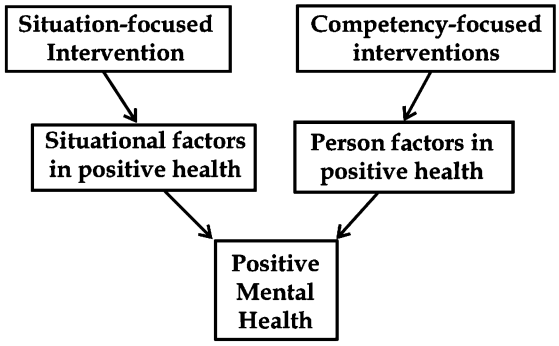
Hence, there is a need to develop in children realistic perceptions about what they can aim for and achieve. Correct training in school prevents negative attributions of events.

4. **Core beliefs** : Cognitive theorists believe that underlying most mental health problems are certain irrational core beliefs. The individual is not conscious of these core beliefs; in deed, these beliefs often develop early in life and affect other cognitive processes. Hence, an important strategy to foster mental health in children is to make interventions to change irrational core beliefs.

General Intervention Strategies

The strategy used by psychological interventions to foster mental health is to reduce the factors that increase vulnerability of mental disorders. These factors, that can increase or decrease mental health, are of two types : situational factors and personal factors. Hence, interventions are also of two types : situation-focused interventions and competency-focused interventions.



Some prominent situation-focused interventions are those that try to enhance interpersonal relations in families, reduce stress within organizations and provide social support by developing a sense of connection to the community at large. Many mental health problems develop, for instance, because of improper family child rearing practice. Parents make conditioned positive regard and have contradictory expectations from the child. This creates a double bind for the child and may lead to split mind (causal factor in schizophrenia) or depression.

Here we shall discuss a successful community intervention programme to prevent mental disorders and thereby to promote mental health. Raine and coworkers (2003) designed a program to prevent the development of anti-social personality disorder in a high-risk slum environment in the inner-city. Children in the age group 3-5 years were randomly assigned to an experimental group that was given an intensive nutritional, physical exercise and educational program. At the age of 17, the children who were part of the experimental group had lower scores on measures of anti-social personality disorder than control group-members.

Competency-focused interventions are concerned with the person factors in mental health. Hence, these programs seek to increase the competency of people i.e., increase personal resources and coping skills. For instance, Rath (1992) had studied the effect of verbal self-instructional training and operant manipulation of response and reward on children from tribal families in Orissa. He found that both kind of training were effective in remediation of impulsive tempo in children. Many other studies have reported that high self-efficacy treatment helps to develop better stress coping skills.

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Lifestyle and Well Being

Till now, we have been discussing various psychological interventions to foster better mental health. But there are certain measures that the individual can take (and should take) to foster mental health. We have discussed of lifestyle and how a flawed lifestyle affects mental health in the chapter on psychological well being. A lifestyle model for perfect health proposed by Parashar (2000) has also been included in the discussion. Healthy lifestyles lead to not only physical well-being but also mental well-being.

Mental health is more than just the absence of mental disorders. Hence, the concept of *subjective well-being* is important here. An individual who sees meaning in life, is motivated towards self-actualization, and finds satisfaction has the utmost mental health. Perfect mental health is found in *Anasakti*. An *anasakt* individual is detached from material pleasures and hence experiences a superconsciousness; a sense of peace with life.

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3

Rehabilitation Psychology

- Prevention
- Rehabilitation
- Role of Psychologists in Rehabilitation
  - of the mentally challenged
  - of the socially challenged
  - of the physically challenged
- Substance abuse disorder
- Rehabilitation of criminals
- Rehabilitation of victims of HIV/ AIDS
- Aging and Rehabilitation
- Juvenile Delinquency
- Rehabilitation of victims of violence

n Prevention

The major focus of mental health efforts has traditionally been restorative, that is, helping people only after they develop disorders. A more effective strategy is to try to provide support and help at early stages, or better yet, to focus on preventing psychological disorders. The concept of prevention is based on this philosophy. Broadly, various strategies for prevention used in public health can be categorised as:

Primary Prevention (PP)

Secondary Prevention (SP)

Tertiary Prevention (TP)

PP refers to efforts aimed at reducing the possibility of disorders and fostering positive health. Once disease or disorder develops, SR is used as an emergency step to reduce the impact and spread of the disorder. TP seeks to reduce the long-term consequences of disorders.

Primary Prevention

PP includes a variety of strategies aimed at reducing the possibility of disorders and fostering good health. Psychologists involved in PP undertake **epidemiological studies** to obtain information about incidence and distribution of various maladaptive behaviours. Epidemiological studies provide information regarding the incidence of maladaptive behaviours and diseases in various sections of the population. The results of these studies are used to define **target groups** – groups that have greater vulnerability for a disorder. For example, it has been found that divorced people and elderly people living alone are at high risk for delusional disorders. They become the target group for preventive intervention programmes aimed at preventing delusional disorders.

After this, psychologists study the factors affecting the vulnerability of these groups. There are two types of factors : *Risk factors* and *protective factors*. Psychologists try to alter conditions that

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contribute to disorders and establish conditions that foster well-being. **Risk factors** are those conditions that contribute to disorders, while **protective factors** are those that foster well-being. For example, in the case of preventing spread of HIV/AIDS having sex with multiple partners is a risk factor while using condoms (doing safe sex) is a protective factor.

Strategies used in prevention programmes are numerous and varied. Yet, they can be studied under the following three heads :

(a) Biological measures of prevention

A major reason for mental retardation is defect in the foetus due to genetic causes or due to teratogens (environmental agents that alter the genetic structure of the baby in the uterus). PP workers provide *genetic counselling* to couples on the status of the foetus. If genetic defects can be identified in advance, abortion may be considered an option.

Before the birth of the baby, PP workers provide *pre-natal care*. After the birth, *post-natal care* is provided for the healthy development of infants. Special care is taken to ascertain that the baby gets necessary vaccines; that the infant gets adequate nutritional inputs etc.

Beyond childhood, PP also looks into factors such as lifestyle that foster both physical and mental well-being, and prevent mental disorders.

(b) Psychosocial Measures

Optimal development and functioning of an individual depends on both maturational factors (nature) and learning (nurture). Hence, learning of physical, intellectual, emotional and social competencies is a psychosocial process. To develop these competencies effectively, the individual needs to be exposed to sufficient stimulants. Proper socialization in a rich environment fosters psychosocial health. We have seen in the chapter on disadvantaged groups the consequence – both mental and physical – of prolonged deprivation from stimulation. PP seeks to provide adequate stimulants to the growing child in the crucial, formative stages.

Also necessary for psycho-social health is that the person acquire an accurate frame of reference; when an individual's perceptions of the world are far from reality, she is more vulnerable to mental disorders. For instance, as Kakar has pointed, socialization process in Indian families leaves an individual with a narcissistic self-concept (see chapter on terrorism). Such identity distortion leads to maladaptive development. Hence, primary prevention measures should include interventions for correct socialization.

Erik Erikson, among others, had stressed that development is a life-long process and we face problems in every life-stage. Primary Prevention looks into problems and crisis during the *whole life span*. For example, parenthood, marriage, career choices etc are problems faced in adulthood. PP in these stages include guidance to parents and couples, and career counselling. Geriatric care is provided to people at the age of retirement. These are some important measures of PP throughout the life span.

(c) Socio-cultural Measures

In many cases, pathological social conditions lead to maladaptive behaviour. For example, it has been seen that most juvenile delinquents belong to low socio-economic status (SES) groups. Sometimes, individuals may be genetically pre-disposed for maladaptive behaviour, but precipitating factors (stressors) are provided by social conditions. For example, a schizophrenic's son faces social stigma due to the wrong belief that madness is genetic. The

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social stigma acts as a stressor to increase the chances of the son becoming schizophrenic.

PP entails the removal of above risk factors. Some popular PP strategies to prevent the occurrence of socio-cultural problems (such as drug abuse, alcoholism, violence) are :

1. Intervention for high-risk groups
2. Intervention for adolescents
   - Educational programs
   - Family-based programs
   - Peer group influence programs
3. Modeling and awareness through mass-media

High risk groups include individuals who, owing to their social situation or nature of work, are more vulnerable than others. For example, Female Sex Workers (FSW) and men having sex with men (MSM) are especially prone to HIV/AIDS. In India, NACO is promoting safe sex practices and regular medical check-up of these groups.

Adolescence is a period of identity confusion. In this stage, people are especially vulnerable to drug abuse and unsafe sex. Hence, primary prevention includes *educational programs* to educate them. Parents are also educated so that they can recognize the symptoms of, say, drug abuse in teens. Owing to the important role played by peer groups in adolescence, there is a pressure for conformity. Interventions such as *assertiveness training* in schools help students resist negative peer pressure.

Modelling is used through the medium of mass media or street dramas to foster positive attitude towards health and well-being; and to develop negative attitudes towards drug abuse and anti-social behaviour.

Secondary Prevention

Secondary prevention emphasizes the early detection and prompt treatment of disorders. It is based on the philosophy that early detection and intervention makes treatment easier. For example, victims of violence show acute response like shock and denial. If not immediately treated, they show delayed responses such as regression to an earlier psychosocial stage (for instance, anal stage or phallic stage) or Post-traumatic Stress Disorder (PTSD). Most contemporary psychologists agree that PTSD is a natural response to traumatic events, yet the severity may be high if immediate help is not provided.

Two popular modes of secondary prevention are *short-term crisis therapy* and *telephone hot line*. Now-a-days, even internet is being used as a means to get immediate therapeutic help from experts. Taking the earlier example of victims of violence, short-term crisis therapy includes debriefing sessions. If the number of victims are too many, everyone may not be able to get help from counsellors. Here, telephone hotline or internet may be used, for example, victims of terrorist attacks in Jammu and Kashmir can be connected to counsellors in Kerala !

Some other secondary prevention approaches are called *harm reduction approaches*. After an individual starts engaging in a high-risk behaviour, the attempt is to reduce the harmful effects of that behaviour. For example, having sex with sex workers is a high risk behaviour. Primary prevention approach is to discourage people from showing such behaviour. But when people start engaging in this behaviour, the secondary prevention strategy is to motivate

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them to engage in safe sex. Similarly, drug addicts are given new needle and syringe by secondary prevention workers. A major reason for spread of AIDS is the use of infected syringe again and again by drug addicts. SP workers provide new needle and syringe so that the addicts don't get AIDS.

Tertiary Prevention

Tertiary prevention involves efforts aimed at reducing the long-term impact of a disorder. Two major modes of tertiary prevention (TP) are:

1. Providing therapeutic climate in mental hospitals, and
2. Aftercare

Traditionally, the focus of mental hospitals has been treatment. It has, however, been found that the hospital environment can influence the patient's mental health. Hence, TP looks at the hospital as a therapeutic community. This approach, called *milieu therapy*, is based on three general principles :

1. Staff expectations are closely communicated to mentally challenged patients.
2. Patients are encouraged to get involved in daily decision-making of the hospital.
3. All patients form a small group. Group cohesiveness gives patients support and a sense of social efficacy; group pressure exerts pressure on the patients to exercise control over their behaviour (Carson et al., 1998).

Even after successful treatment in hospitals, readjustment in the community is difficult. Many studies have shown that as much as 45% of schizophrenic patients have relapsed. So what is the solution ? TP provides a solution in the form of *aftercare*. Aftercare programs smoothen the transition from institutional to community life and reduce the number of relapses. *Halfway homes* are health facilities managed by the community where patients stay for a while after leaving hospital. Here, community and family play proactive roles to teach social skills for readjustment to community.

The role of TP doesn't end after the patient starts her normal life. Relapse can occur even now... relapse occurs when the treated patient faces high-risk situations. People with high coping skills can resist relapse, but many can't. For them, relapse prevention training and regular follow-up sessions are necessary.

n Rehabilitation

Rehabilitation refers to all attempts made at training and retraining an individual (usually with some kind of disability) so as to enable the individual achieve maximum possible functional capability. Due to various environmental and personal factors, an individual may face a situation of crisis, a disability or so to say inability to properly integration with her social environment. For example, an accident may lead to physical disability. A physically disabled person is no longer the same person. If one has lost a hand, she finds it tough to work in office to the same capacity as she earlier could. She finds it tough to adjust to her daily lifestyle and social life. But if she is trained, she can attain maximum skills that could be attained with one hand lost. Hence, the need for rehabilitation. The role of rehabilitation, in a broad sense, is to *restore status* of an individual who has met with a *disabling crisis*.

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Rehabilitation is different from treatment in the sense that treatment is based on the medical model, while rehabilitation draws from many social and physical sciences. If an individual tries to commit suicide by taking person, the doctors try to save her life. They don't enquire into what caused suicidal behaviour and whether the individual will be prone to suicide again! Similarly, in the case of a physical disability, doctors provide only surgical help. A person who has lost a limb in an accident naturally feels *depressed*, may lose *subjective efficacy*, may feel *powerless* and *helpless*. These are serious problems; these psychological problems may infact be more serious than physical disability. You can easily lead a life of dignity without a limb. You may even get a good job. But if after your disability, you get self-defeating, *negative thoughts* or perceive an *external locus of control*, these the doctors don't cater to. On the other hand, rehabilitation workers look into all aspects of the individual's problems : physical, psychological and social. The ultimate aim of rehabilitation is to bring about a proper person-environment (PE) fit. To put it without psychological jargon, the aim of rehabilitation is to *reintegrate the individual to her community and to ensure that she can perform to her maximum ability possible*.

n Role of Psychologists in Rehabilitation

The role of psychologists span over the three stages of rehabilitation : Assessment, Intervention and Aftercare. Also, it needs to be emphasized that a rehabilitation psychologist is both a scientist and an artist. She works within the theoretical framework of psychological research. At the same time, she tailors her rehabilitation programme to the needs of the specific client. Every client has problems unique to him, which the psychologist has to deal. Hence, she is both a scientist and artist.

The role of psychologists vary as per the individual needs and problems of the client, yet a general analysis of the role of psychologists can be made as under :

Mentally-Challenged Persons

Mentally challenged persons are the ones who have developed maladaptive behaviour due to a complex interaction between environmental stressors and genetic factors.

Previously, the medical model was followed in treating mentally challenged persons. As a result, persons with mental disorder were institutionalized in mental hospitals. They were given drugs and medicines that supposedly cured mental disorders. But lately, there has been a movement for deinstitutionalization. Many recent researches have found that medicines and drugs have side-effects. Besides, they only provide temporary cure to any abnormal behaviour. Other studies have confirmed that a mental patient needs her family and friends the most for recovery, and institutionalization simply cuts the patient from her social support. Hence, rather than helping mental patients, institutionalization worsens their condition. Hence, a focus on rehabilitation over treatment. Rehabilitation workers see individuals with disorders as "clients" rather than "patients". Now let us turn our attention towards the role of psychologists in rehabilitation of mentally challenged persons :

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(a) Crisis Intervention

Some psychological help may be needed immediately after a crisis. It is always not necessary but may be necessary in certain cases, such as, for the victims of a terrorist attack. The immediate response of victims of such traumatic violence is shock and denial. If these are not dealt by a psychologist (usually the psychologist does a debriefing session to bring the victim out of the state of shock) immediately, the victim may experience severe PTSD or may go to a state of deeper psychological regression.

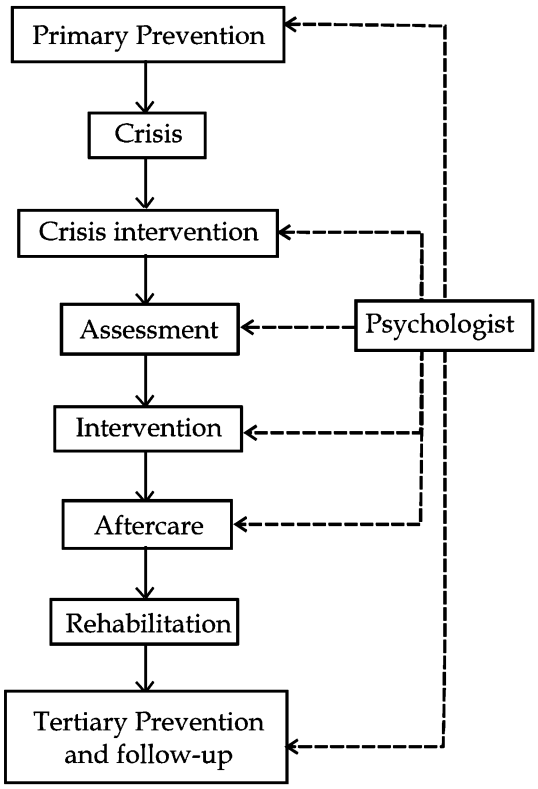

Fig : Steps in prevention and scope of psychologist's role

(b) Assessment

The nature of problem varies from person to person. Hence, there is a need to assess the situation of the client, to understand his problem holistically. To do so, the psychologist makes various assessments, such as :

1. Study of client's social history
2. Interviews and clinical observation
3. Personality tests such as MMPI
4. Projective tests (ex. TAT)
5. Neurological examination using EEG, PET, and MRI scans
6. Neuropsychological tests measuring cognitive, perceptual and motor abilities.

Let us take the hypothetical case of Hari to understand the job of a rehabilitation psychologist better. Hari is a student of electrical engineering and has attempted to commit suicide. The psychologist tries to understand the client's *social history*. She finds that Hari was good at music and wanted to make a career in it. However his parents forced him to study electrical engineering. Since he did not have the aptitude for it or interest in the subject, he regularly failed in exams. Did it lead to depression ? Did it hurt his self-esteem ?

To know the answers to these questions, the psychologist interviews him and his family members. She also makes use of *clinical observation* method to check psychological responses such as emotions, aggression, anxiety, hallucinations or delusions. Clinical observation refers to detailed observation of the client when he/she is admitted in the hospital. This is usually done through hospital staff or by video recording.

To understand Hari's self-concept, she tests Hari on personality tests like MMPI and Eysenck

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Personality Inventory (EPI). Was Hari introvert? How good a friends' circle did he have ? Was he evasive ? or neurotic ? Many students who commit suicide often show introversion, social withdrawl and neuroticism.

What were the environmental stressors on Hari? The psychologist also studies Hari's peer group, family relations and his relations with his professors to understand the social context; often social contexts are precipitating factors for maladaptive behaviour.

Lastly, could the suicide attempt be an instinctive behaviour due to some genetic or biological factor? The psychologist takes the help of neurologists and neuropsychologists. Neurologists use MRI, EEG and other such instruments. An electro-encephalogram (EEG) can assess brainwave patterns; Magnetic resonance imaging (MRI) can detect structural anomalies in the central nervous system, Position Emission Tomography (PET) Scan throws light on brain activity. Neuro-psychologists provide testing devices to measure Hari's cognitive, perceptual, and motor performance.

After doing assessment, the psychologist has the option of making a formal diagnosis on the basis of DSM-IV classification of disorders. However, the psychologist tries to avoid formal classification as much as possible as such a classification is associated with social stigma. DSM-IV classification becomes necessary when the client is so disturbed mentally that she has become a danger to society; or when the condition is so severe that there is a need for admitting the client in a mental hospital.

(c) Intervention

The medical model advocated medication as the route to treatment. However, psychologists believe that therapy and counselling are better and more durable strategies of intervention. In deed, the rehabilitation psychologist decides if hospitalization is at all necessary. Many schizophrenics, for instance, have been found to recover by use of cognitive behavioural therapies, self-help and family intervention.

Next, the psychologist determines the nature of mental disorder and the therapy best suited for the disorder. Generally, psychologists make a wise combination of many different therapies in their rehabilitation program (this is called **eclectic approach**). For example, cognitive therapy is best for dealing with depression, and psychoanalytic approach is quite effective in dealing with anxiety related problems. So a combination may be needed for a military person who has tested high on both.

In the case of brain disorders affecting cognitive functions, the psychologist targets skills lost by brain dysfunction. She may develop compensatory strategies for the client; for example, if a client faces memory problems, she may train him in using a laptop as a log book to organize information. **Social skill training** using behavioural techniques of positive reinforcement and modelling have been found to be quite effective in treating schizophrenia and other mental disorders. Application of these simple learning principles leads to significant improvements in social functioning and in the quality of life of patients suffering from disorders.

(d) Aftercare

After intervention succeeds in developing functional autonomy in a person with mental disorder, she is taught social skills so that she can be adequately rehabilitated back to society.

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Aftercare happens in halfway homes. The client released from mental hospital has a gradual return to the outside world through halfway homes. At the halfway home, the individual's interaction with family and peer groups is increased. She is trained to develop functional skills for employment also.

Physically Challenged Persons

Physical disability produces **stressors** that are cumulative. These stressors lead to psychological ill-health. For instance, a person who loses a limb in an accident perceives an external locus of control. Her *self-efficacy* gets a beating and she may become depressed. Her emotional reactions may range from *anxiety* to *learned helplessness*. Also, status in family and peer group decreases. This leads to a *lowered self-concept*.

A depressed person feeling learned helplessness may not even try to adjust to her new condition. *Denial* or *avoidance* are defensive styles that may be used by the person.

The psychologist uses various stress management techniques to reduce the effect of stressors. She can counsel the client in Rogerian therapy to increase her self-concept; cognitive approach is effective for anxiety and depression. Techniques such as biofeedback have been used in novel ways to improve aspects of motor control.

Not just therapy, the psychologist helps the client in many other ways. For instance, she suggests **adaptive technologies** for the client and **ergonomics** for places the client frequently visits (for example, facilities in the toilet so that the client feels comfortable and is not reminded of her disability).

Socially Challenged Persons

Socially challenged individuals are those who have become marginalized in society because of their inability to follow social norms. Juvenile delinquents, individuals involved in criminal activities, drug addicts and alcoholics are examples of socially challenged persons. Not just deviant behaviour, developmental challenges in the life span also may lead to social challenges. For example, old age problems are certain problems that make the olderly citizens socially challenged.

The role of psychologists in rehabilitation of socially challenged persons begins with early detection of problems. **Epidemiology** is the study of distribution of disorders in a given population. Psychologists make epidemiological studies to assess the distribution of social problems, and to find groups where incidence of social challenges is high. The intervention technique differs widely for different cases of social challenges. However, it is generally agreed that the social deviants are deviants because of lack of proper small group. There may be other causal factors also, but best intervention is provided by small groups. Hence, role of community and family is paramount here. Many field psychologists working in the area of community welfare develop community-based interventions to rehabilitate victims of substance abuse disorder and alcoholism.

The socially deviant individuals are deviants because they don't conform to social norms. They don't conform to social norms because they are not properly socialized. Hence, *resocialization* is seen as an effective strategy to rehabilitate them. This, again, is most effectively done in small groups. Group therapy approaches such as alcoholic anonymous (AA) has been found to be effective. Psychologists are also

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using innovative strategies to treat drug addicts, alcoholics, paedophiles etc. For example, a picture of a child (conditioned stimulus) is paired with shock to treat pedophiles. Nausea producing drugs are mixed with alcohol in some therapies to condition an avoidance towards it.

Aftercare is the last stage of rehabilitation. Here also there is a high chance of relapse. We will deal with rehabilitation of victims of alcoholism, substance abuse disorder, juvenile delinquency etc. in greater detail in other sections in this chapter.

n Substance Abuse Disorder

Substance abuse disorder is a major problem being faced at various levels : society, family and the individual. Harmful for personal health, it is also dysfunctional to family and society. Many drug-abusers resort to crime in order to maintain their supply of drugs. Drug abuse is also related to incidence of HIV/AIDS. Use of infected syringe for drug intake increases the risk of getting HIV/AIDS. Drug overdose kills. Hence, there is a need for prevention of drug abuse, and rehabilitation of victims of substance abuse disorder.

Prevention

The first step to preventive interventions is identification of *target groups*. Teens are the most vulnerable group of population when it comes to substance abuse. Hence, awareness programme must be directed towards teens. These programs usually use 'fear' to induce a negative attitude towards substance abuse in adolescents. However, it has been found that just appealing to teens is not enough. Teens who get involved in high risk behaviour usually selectively don't attend to such messages. Hence, there is a need to educate parents too. Very few parents are aware of the symptoms of substance use. Hence, they can't detect the high risk behaviours of their children. There is a need to educate them through messages sent via mass media.

The peer group has a significant role to play in influencing substance use behaviour. This is because, peer groups have great influence on an individual during adolescence. There is always the pressure to conform to group norms. *Assertiveness training*, among other forms of training, helps the individual to resist group pressure.

Rehabilitation

Rehabilitation of substance abuse disorder follows the following steps :

1. Assessment of dependency
2. Intervention and counselling
3. Aftercare and relapse prevention

Assessment of dependency

Drug dependency has two broad dimensions – *physical dependency* and *psychological dependency*. With regular use of drugs, tolerance level of the body towards the particular drugs increases. Owing to this, the same amount of drugs that previously gave the 'kick' doesn't show desired effects. The abuser starts taking more amount to keep up the 'kick' (See the chapter on disorders). This leads to physical dependency. Such is the dependency that disuse of the drug leads to **withdrawal symptoms.**

Another form of dependency is psychological. What is the ability (or efficacy) of the abuser to resist the use of drugs ? What coping style does he use if drug supply is stopped ? What are the cognitions/beliefs behind

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the craving for drugs? The answer to these questions vary from individual to individual. Those with high psychological dependence on drugs believe that they can't live without drugs. They have low self-efficacy and an external locus of control.

The rehabilitation worker has to assess both physical and psychological dependency. This is because sometimes substance abuse is due to physical dependency; in other cases due to psychological dependency. In still other cases, both dependency interact to produce complex forms of the disorder. The goal of rehabilitation is to counter both forms of dependency.

So, how do you assess extent of drug abuse? Biological testing is used to check whether drug has been consumed. In biological testing, the specific drug in a blood sample can be assessed. But biological testing cannot assess (a) the duration of time since when drugs are being consumed, (b) the amount and frequency of drug consumption, (c) the means of drug consumption (smoke or through nostries, or directly injected to blood) and (d) the extent of dependence. Biological testing is, hence, useful as proof of drug abuse in courts, but of not much use in assessment of substance abuse disorder.

Therefore, the primary method of assessment of substance abuse disorder is interview. The **diagnostic interview** is conducted with the substance abuser, as well as family members and close friends. In addition, information about the disorder is obtained from self-report and paper-and-pencil tests (Dodgen, 2004). The psychologist typically searches for the following information in a drug abuse assessment (Dodgen, 2004) :

1. List of all drugs ever used
2. Age of first use of these drugs
3. How have each of these drugs been used, did the abuser smoke, drink, snort, or directly inject into the blood stream ? (Note that the way a drug is taken into the body is important. When it comes to the effect of drug taken, snorting is more effective and faster, than smoking; and injecting into blood is more effective than snorting. A drug abuser who has acquired high tolerance due to regular use steadily moves from smoking to snorting and finally to direct injection into blood).
4. Age of pear se, and amount of the drug used.
5. Amount of drugs used in a day typically.
6. List all negative consequences of using various drugs.

Intervention and Counselling

The steps that rehabilitation of an individual suffering from substance abuse disorder goes through can be understood from the transtheoretical model. This model states that behavioural change proceeds through six steps (Prochaska and Narcross, 1994) :

1. Precontemplation: No intention to make change.
2. Contemplation: Contemplating a behavioural change, but not actively doing it.
3. Preparation: Making small changes.
4. Action : Actively following new behavioural patterns to overcome the problem.
5. Maintenance: Sustaining the change over time.
6. Relapse, and finally termination.

The model states that these steps don't follow a linear path, rather they follow a rehabilitation path as follows :

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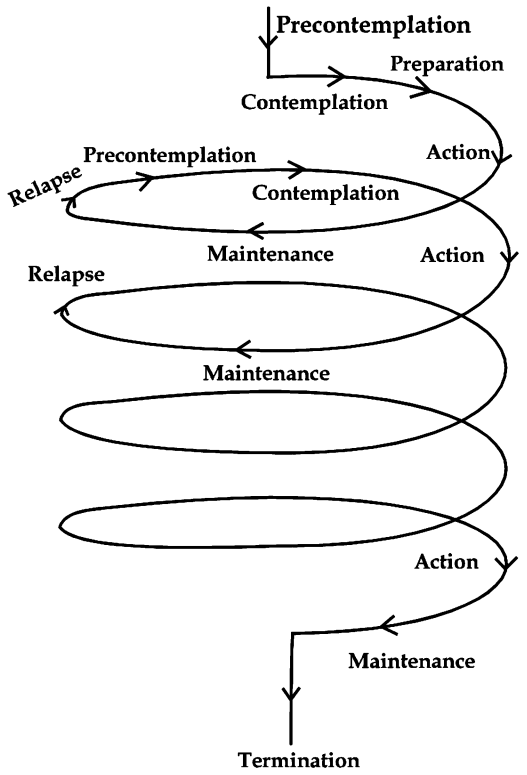

Fig : The transtheoretical model; Based on Prochaska and Narcross (1994).

A variety of intervention strategies are used to reduce (or eliminate) the dependency on drugs – ranging from medical solutions to psychotherapies. These can be summarised as :

1. Pharmaco therapies
2. Disease model and 12-step process
3. Client-centred therapy
4. Psychoanalytic therapy
5. Cognitive therapy
6. Motivational interviewing
7. Behaviourist therapies
8. Group therapy

Pharmacotherapy refers to the use of certain medicinal drugs to treat addiction. For example, methadone is a drug that gives effects similar to substance abuse drugs, but is not as harmful. Methadone can be used as a substitute to the drugs taken by the patient in a rehabilitation centre. This way the withdrawal symptoms could be avoided during treatment. However, pharmacotherapies only give temporary solutions, not permanent rehabilitation. They are effective in controlling withdrawal symptoms in the patients; hence can be used for temporary relief to the patient while a longer rehabilitation program is underway.

The **disease model** of addiction argues that addicted individuals are predisposed to drug addiction (due to genetic, biological, or trait factors). Hence, the individual is powerless on the face of her addiction. Naturally, the treatment considers the client as a 'patient'. A behavioural treatment strategy called 'twelve step programs' is used where the addict is forced to renounce her former lifestyle. Though criticized by many psychologists, this method does show immediate results. Of course, relapse can be high if the addict is not monitored regularly.

Most popular and effective intervention programs today include counselling. One effective approach to counselling is the **client-centred counselling**, in which the therapist shows (a) unconditioned positive regard, (b) empathy, and (c) genuineness to the client to help her solve her own problems.

The **psychoanalytic approach** to addiction assumes that the main cause of addiction is

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unconscious need to entertain and to enact various kinds of homosexual and perverse fantasies, while at the same time fearing social rebuttal. Psychoanalysts argue that specific drugs facilitate specific fantasies. Drug use is a better substitute than masturbation to entertain homosexual and perverse fantasies. Though this basic assumption is proved false empirically, psycholoanalytic approach is still popular.

A **cognitive model** of addiction is forwarded by Aaron Beck in his book 'Cognitive Therapy of Substance Abuse'. This therapy is based on the assumption that there are certain core beliefs that the addict himself may not be aware of. For example, an addict may believe that he is useless, but is not consciously aware of his belief. The core beliefs trigger a system of addictive beliefs. Addictive beliefs are imaginated benefits of drug use. For example, if your core belief is that you are useless, addictive beliefs like "drugs are fun", "drugs help me escape the world", "I am not accountable to anyone if I use drugs" etc. are triggered, while the individual is not consciously aware of the core beliefs, he is consciously aware of addictive beliefs. These addictive beliefs increase the craving for drugs. Cognitive therapists try to uncover underlying core beliefs and negative thoughts to solve the problem of substance abuse.

Motivational interviewing is a variation of client-centred therapy, whereby the therapist doesn't confront the client with the problem. Rather, the therapist leads the client to her own conclusion by asking questions that focus on discrepancies between the current state and the individual's ideal self-image. The mechanism is basically that of cognitive dissonance.

It is acknowledged by most psychologists that a supportive peer group helps better cope with withdrawal symptoms. Hence, logically **group therapy** is an effective intervention. In group therapy, behaviours are modified through role playing, psychodrama, discussions etc. Some **behavioural techniques** are quite effective in treating substance abuse disorder. A popular behavioural technique is **aversion therapy** in which the drug is paired with an aversive stimuli such as electric shock. When the client is conditioned, her response (conditioned response, CR) to the drug is similar to that of her unpleasant response to the aversive stimuli. A problem with this therapy is that though successful in laboratory conditions, it doesn't guarantee behavioural change in real life. In other words, the response learnt in laboratory doesn't get transferred to real life situations. A client may reason that now that she is outside the institution, she won't get shock if she tries drugs !

Aftercare and Relapse Prevention

As studied in the transtheoretical model, there is a high danger of relapse after the client is released for reintegration into society. Whether the individual relapses or not depends on her coping skills. Martlett and Gordon (1985) have forwarded the **relapse prevention model.** This model is represented in the figure. According to this model, relapse happens in two stages. In a high risk situation, first lapse takes place (single occurrence of drug use), and then relapse (back to the situation before treatment). There are four psychological processes involved in lapse (Martlett and Gordon, 1985).

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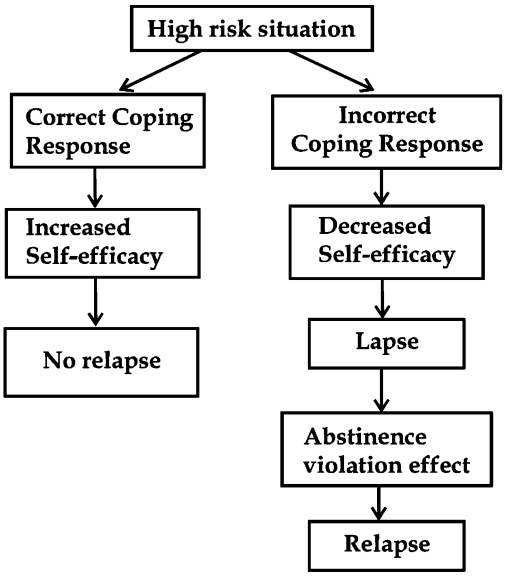

Fig. : Relapse mechanism. Adapted from Martlett and Gordon (1985)

1. Self-efficacy
2. Outcome efficacy
3. Attribution of causality
4. Decision-making process

Suppose I, as a rehabilitated addict, encounter a relapse-provoking situation (for instance, meeting a former addict peer). If I am offered drugs, my efficacy determines whether I can resist it. The outcome expectancy of drugs use also affects my decision. If I take the drug this one time, what rationale do I use to explain my lapse? If I use external attribution ("the peer forced me"), I am confident that this is only one occasion and won't be repeated. But if I use internal attribution ("It is my fault ! I can never quit !"), the chances of relapse increases.

The transition from a single lapse to relapse is explained in terms of **abstinence violation effect.** After one or two lapses, the individual gets negative thoughts, such as, "I couldn't abstain from using drugs ! I can never recover ! I can never recover ! I can not quit" This further reduces the self-efficacy to resist use of drugs. With lowered self-efficacy and rationalize that one can never be free from drug dependence, relapse becomes inevitable. Abstinence violation effect is but a *self-fulfilling prophecy* about one's inability to resist drugs. Everytime the prophecy gets fulfilled (by lapses), the belief gets strengthened. Ultimately, the individual relapses.

It is the task of rehabilitation – workers help the client deal with such relapse–provoking situations. The individual needs to be trained in proper coping responses. Secondly, regular follow-ups must monitor her situation.

Virtual Reality in Relapse Prevention

How does one deal with relapse-provoking situations? One way is by training in competencies to cope with the situation. These days, psychologists are using virtual reality (VR) technology to provide an environment wherein alcoholics and addicts can practise how to say 'no' to drugs/alcohol in a realistic setting.

Basically, the VR environments consist of certain cues and settings that a rehabilitated person might find challenging, such as a bar with imbibing patrons; a rave party; or a dimly lit room with drugs in a drawer. Provided the VR environments are real enough, the participants' cravings are intensified. So now the psychologist can develop coping skills in the client by training and retraining. And the client can practise the coping skills till she can use them in real life.

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Role of Social Agencies

In India, the management of drug addicts has traditionally been the responsibility of the family or the social group the addicts belong to (Tamhankar et al., 2005). However, there has been greater appreciation of the role of social agencies of late due to the realization that drug addiction is a psycho-socio-medical problem and needs to be tackled holistically. In contrast, social agencies have played a significant role in the west since long. For instance, one of the successful social agencies in the west is the Alcoholic Anonymous (AA). AA makes use of strategies like *buddy system*, group understanding of alcoholism and *forgiveness for lapses* to build self-worth and alleviating the feelings of isolation (Tamhankar et al., 2005).

The nature of work of social agencies in India are broadly of three kinds :

1. Research on extent of drug abuse in society and collecting epidemiological data
2. Prevention of drug abuse
3. Rehabilitation

Organizations such as UN Office on Drugs on Crime (UNODC) and Indian Council of Medical Research (ICMR) are involved in research on the extent and type of substance abuse disorders. Many reports of these agencies are available on the internet.

Then there are agencies (both NGOs and government sponsored agencies) that are involved in primary prevention of substance abuse. They seek to educate targeted groups and improve the self-efficacy of members of their target groups in resisting the temptation of substance abuse. Some agencies are involved in awareness generation about bad effects of drug abuse. Some NGOs even use street plays in innovative ways to sensitize people about the issue.

Still other agencies are involved in rehabilitation. For example, take the case of ARPAN. ARPAN stands for "Association of Recovering Peer Action Network", the word means to present or to offer in dedication in Sanskrit. ARPAN works on the principle that for any recovering person, motivation and guidance are the two major pre-requisites. Hence, the need for a peer group to motivate the patient to tolerate the withdrawal symptoms. Basically, drug abuse is the result of incorrect socialization in a deviant peer group. Hence, a solution to this is resocialization in a functional peer group.

A few social agencies have come up that seek to provide a therapeutic community to rehabilitating drug abusers. For example, **Kripa Rehabilitation Centre** (KRC) offers a non-discriminating supportive community living, helping people to introspect and bring about changes in their lifestyle. KRC's model of therapeutic intervention is based on Yoga and T'aichi (indigenous therapies of the East) and seeks to bring about lifestyle changes and in turn resolution of substance abuse. (Tamhankar et al.m 2005). The impact of KRC's holistic therapeutic intervention programme for de-addiction has been empirically studied. Aparna Tamhankar and her coworkers (2005) studied the effect of KRC's de-addiction programme on 40 employees of Bharat Petroleum Corporation Limited (BPCL). Of the 40 clients, 18 recovered completely from addiction and 80% remained sober for three months.

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n Rehabilitation of Criminals

There are many types of criminal behaviour. In most cases of crime, criminal behaviour is propelled by a host of social, economic, political and emotional factors. Most criminals are not born criminals, but have been led into crime due to circumstances.

Most of the convicts who are jailed are first-timers, i.e. they have shown criminal behaviour for the first time and have been jailed for that. "They commit anti-social acts due to negative attitudes towards life, humanity and country and that too, in a fit of some negative emotions like anger, fear, hatred, passion, lust, greed and jealousy. The criminal act... can also be attributed to their inability to tolerate injustice meted out to them or their near and dear ones; frustration of some important psychobiological needs; wrong attitudes towards life and others; wrong upbringing and treatment or unfortunate circumstances of their life. Whatever be the genesis or dynamics of their criminal acts they are always redeemable. If these youngsters are helped to control and regulate their emotional reactions, rectify their attitudes towards others and their psychophysical needs are taken care of, they can always be mended and brought back into the main stream" (Jain, 2004)

The philosophy behind rehabilitation of criminals is to bring them back into the main stream. Not every criminal is redeemable. But the majority are. Most of the criminals who have committed grave offence have done it in a fit of anger, or due to a wrong decision. In deed, majority of the criminals are first timers. They are convicted for one time crimes. But the problem is that once convicted, they become social outcasts. All life, they live with the social stigma of being convicted criminals. Hence the need for rehabilitation.

Problems of Convicts

Convicts are the persons who have shown criminal behaviour and have been punished by a court of law with imprisonment of certain duration. There are many types of convicts – rapists, thieves, gang lords, contract killers, murderers etc. Most of the criminals are criminals by circumstance. Suppose you find that your wife is cheating on you and in a fit of anger you kill her. You become a murderer, but you aren't a murderer past redemption. You can still live a life of dignity and meaning, inspite of the crime you have committed.

There are certain problems faced by convicts in living a life of dignity and meaning. Some of these are :

1. After a long period in the jail, when convicts are released they find it hard to **reintegrate** to society. One major problem is that of finding a job. After staying for five years in a jail, for example, an individual doesn't find his skills enough to get a job. If he has two years of experience in an industry, he doesn't fit the profile of any job. He doesn't have the experience to get a job equivalent to his age. Neither does he get a job equivalent to two years of experience because younger people are preferred for the job. Secondly, many things have changed during the period he was in jail. For example, technological changes are fast. A person in jail is not abreast of these changes.
2. There is also the problem of reintegration with community when released. Usually people view an ex-convict with suspicion. There are widespread prejudices and social stigma. It is not even sure if the returned prisoner's family will accept him. A few

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convicts stay in jail for long periods (10-14 years) for one-time grave offences. 10-14 years is a huge time, and society, social norms and values changes in that period. These convicts find it very tough to adjust.

3. The jail is like a **total institution.** It cuts you off from society altogether and new social norms (of the jail convicts community) determine your behaviour. If you stay in such a society for 8-10 years cut off from mainstream society, it is really tough to adjust to mainstream society when released from jail.
4. There are certain grave problems faced by convicts when in the jail itself. One major challenge is to find meaning in life. The social stigma attached to crimes is so high that one does not have much hope of leading a life of dignity. This instills a fatalistic attitude and learned helplessness in them. The convicts have very low expectancy from the rest of their life. As a result, they are demotivated from taking any initiative that may help them realize their potential thereby increasing their subjective well-being.
5. There are many **environmental stressors** that a convict has to deal with. They have non-existent personal space. Most Indian jails are crowded and various psychological impact of crowding are relevant in the case of Indian jails. The convicts have a restricted sex life. Owing to this, many turn to homosexuality. Often, newly convicted adolescents are subjected to sexual harassment by senior homosexual convicts. This increases the risk of HIV/AIDS among convicts.

The social life in Indian jails is not conducive to healthy development of the individual. Since many criminals with diverse background and diverse personalities are put together, clash and violent acts are common. Frustration over all above factors leads to greater aggression. Recreational facilities are limited and go to those who have better understanding with jail staff.

Hence, we can easily see that the stressors in jails are so many and so intense that they can overwhelm the individual convict. The convict faces problems like depression, anxiety, anger, delusions etc. Many convicts fell guilty about their acts and suffer from trauma related to the act of violence.

Interventions

The interventions to rehabilitate criminals, made in the jail setting, are two-fold : one, to help them cope with environmental stressors, help them develop their personality and help them to explore meaningful goals. Two, to help them develop skills that would lead to smooth transition frol jail to society. Rehabilitation is an attempt to train and refrain the convicts till they attain maximum functional ability. Both forms of interventions are important in contributing to the goals of rehabilitation.

Various skills are imparted to convicts when they are in jail, so that they find themselves more potent when they leave the jail to join society again. For example, many convicts study through distance education mode, and even get degrees. IGNOU has its study centres inside some major central jails of India (It has a study centre in Tihar Jail). Jail authorities try to assess the skills of various convicts and give them suitable employment within the jail. There are many such measures being undertaken in jails.

The role of psychologists in intervention is most profound in attempts to change the convicts' attitude, personality, coping skills and motivational pattern. We have already seen

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how stressful jail life is. Further a voidness and meaninglessness is experienced in jails. *Guilt* feeling, *tensions over family relations, anxiety, aggression, frustration over non-existent sexual life, homosexual negative thoughts, depression* etc. are recurring problems that obstruct the rehabilitation of criminals. To tackle with these problems, interventions based on cognitive behavioural therapy have been found to be effective.

In the Indian setting, meditation-based approaches have been hugely successful in dealing with these problems. A most successful intervention programme is that of **Vipassana Meditation** in Tihar Jail under Kiran Bedi's guidance (she was then the police commissioner of Tihar jail). Namita Ranganathan and her colleagues (2008) at Delhi University have observed that Vipassana helps prison inmates to attain peace of mind, deal with their emotions related to the crime that they have committed and reconstruct their identities. From their study of Vipassana camps in Tihar Jail, they conclude that Vipassana meditation has a number of psychological benefits. This includes :

- Better emotional control.
- Better anger management.
- Developing a sense of hope for the future.
- Confront feelings of remorse and guilt.
- Deal more positively with life behind the prison walls.

An interesting trend observed by Ranganathan and colleagues is that the meditation programme had more committed following in the age group of 20-30 years, particularly by those who had been implicated for serious crimes like rape, murder and dowry killing. Another study on impact of Vipassana on jail inmates has shown that there is considerable reduction in neurotic predisposition, and feelings of hostility, and an enhancement in the sense of hope and well-being following Vipassana (Chandramani, Dhar and Verma, 1998).

Other forms of meditation like transcendental meditation have also been proved to be effective in reforming, and ultimately rehabilitating prison inmates. Bunk (1979) has found positive effects of hatha yoga and mantra meditation on the psychological health and behaviour of incarcerated men. **Preksha meditation** based on Buddhist philosophy, has also been found to give effective solutions for problems faced by jail inmates. In one study, Dr. Swatantra Jain (2004) of Kurukshetra University showed that when preksha meditation was conducted on 28 adolescent convicts of Borstal Jail (in Hisar, Haryana) for 16 days, the inmates differed on scores of attitudes, values, and personality factors between pretest and posttest.

Role of Social Agencies

Social agencies have made their presence felt in recent years in the field of rehabilitation of people with criminal behaviour. For example, SRIJAN is a sister organization of the Art of Living foundation spear-headed by Sri Sri Ravi Shankar himself. SRIJAN tries to solve various problems of jail inmates, and the problems of rehabilitation into mainstream society when the inmate is released from jail.

The **India Vision Foundation** was started when Dr. Kiran Bedi received the Ramon Magsaysay award. Dr. Bedi, the first lady IPS officer, is also known for converting Tihar Jail into a therapeutic jail. She had initiated many rehabilitation programmes and India Vision Foundation (IVF) seeks to further these programmes.

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n Rehabilitation of Victims of HIV/AIDS

AIDS stands for Acquired immuno-deficiency syndrome. It is caused by a virus called Human Immunodeficiency Virus (HIV) that attacks the immune system, specifically the T-cells that are crucial for fighting diseases. The disease spread through transmission of bodily fluid like blood, serum etc from one individual to another. The prime means of spread of HIV virus is by sexual contact and use of infected syringes. Another means of spread of HIV virus is that of transmission of bodily fluid of a pregnant woman into her foetus, thus infecting the baby in it. There is no cure for AIDS. Till date, the most efficient treatment is Anti-Retroviral Therapy (ART). ART helps to slow down the progress of the disease, but can't cure the individual of the infection. Hence, the primary concern of psychologists in the case of AIDS is prevention. The proverb 'prevention is better than cure' is most relevant in the case of AIDS. In this section, we will study various strategies for prevention of HIV/AIDS and once the disease is communicated to an individual, problems faced by victims of AIDS and psychological rehabilitation to solve these problems.

Prevention

In the absence of a cure, the only means of controlling the AIDS epidemic is by changing high-risk behaviours that transmit the virus. Hence, the challenge of AIDS is more of a psychological problem than a medical one. High-risk behaviours include having sex with multiple partners; men having sex with men without using condoms; not practising safe sex when having sex with more than one partner; using infected syringe; sharing of syringes when injecting drugs into the blood.

Perhaps the most risky behaviour is unsafe sexual behaviour. Two concerns in this regard are :

1. The risk of AIDS can be reduced substantially by the use of condoms, but people seem to be reluctant to use them.
2. Many people indulge in sexual behaviour with multiple partners. In a study in USA (Reinisch et al., 1988), it was found that 37% of husbands and 29% wives had at least one additional sexual partner besides their spouse/partner. Approximately one-third men had sex with a prostitute.

Prevention programmes target the high-risk groups, as well as provide information to general population. These programmes are mostly of the following types :

1. Education programmes
2. HIV/AIDS Awareness Programmes
3. Community based intervention
4. Harm Reduction Programmes targeted towards drug addicts.

1. AIDS Education Programmes :

Schools are an ideal venue to promote healthy behaviour because they consist of young people who could be prevented from picking risky habits. School-based interventions are done through sex education in general, and education regarding AIDS in particular. AIDS specific educational programmes are based on various

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theoretical models. For example, the cognitive models emphasize the role of attitudes, beliefs and cognitions in preventing high-risk behaviours. The social learning theory, on the other hand, stresses on modelling and increasing perceived self-efficacy. Flora and Thoresen (1988) have a model AIDS prevention curricula based on social learning theory (Kool and Agrawal, 2006). The table below shows some educational approaches their curricula is composed of :

Theoretical approach	Educational approach	Primary approach	Secondary approach
Cognitive/ emotional	Providing knowledge	Regarding avoidance of certain behaviours	Regarding safer sex practice
	Self talk	"I don't have to have sex"	"It is OK to use condoms"
	Self efficacy	Perceive ability to resist sex	Perceived ability to use condoms
Behavioral	Behavioral outcomes	"Avoiding too much alcohol increases my control over sex behavior"	"I can talk to my partner to use condoms"
	Social skills	Resisting peer pressure for sex	Negotiating with partner for safe sex
Societal	Social support systems	Peer encouragement for avoiding sex	Peer encouragement for safer sex
	Incentives	Getting social rewards for avoiding sex	Increased intimacy permitted if partner agrees to limit sex
	Vicarious	Training older peers to demonstrate avoidance of sex	Modeling of safer sex practices

A Comparison to some Educational Approaches for Primary and Secondary Prevention of AIDS among Adolescents (Source : Flora & Thoresen, 1988)

Though it is easy and more effective to apply AIDS education programmes in the school setting, these education programmes can be introduced in other settings like adult education organizational training, AIDS awareness camps etc.

2. AIDS Awareness Programmes :

Many risky behaviours are the result of lack of awareness about AIDS. Long ago, I had read in a news article that sex workers in some part of India believed that AIDS can be cured by bathing in Coca Cola. Though you may wonder where the connection for such weird notions arise, the truth is that the awareness level about AIDS is very low. Owing to this, many people still indulge in unsafe sex.

Due to this very reason, the National AIDS Control Organization (NACO) invests heavily in creating awareness about AIDS. The mass media – TV, radio and newspapers – is the main medium of creating awareness regarding

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AIDS. The question is how effective is mass media based awareness in preventing risky behaviour? In a landmark study over five years in Tanzania, Vaughan and his colleagues (2000) have demonstrated the effect of awareness programmes aired on Radio Tanzania on attitudes and behaviours of people. This study is discussed in greater detail in the chapter on mass media.

Besides mass media, other mediums like street plays, community events, fairs etc. can be used to generate awareness about AIDS.

3. Community based intervention :

Community based interventions are made to reduce risky behaviours in a variety of populations, such as, adolescents, homosexuals, and urban women. Many intervention programmes have been developed with varying degree of success. Here, we will be discussing two programmes designed by Kelly and his colleagues, that have been found to be quite successful approaches.

The first is the **behavioural skills approach** developed to target small groups at high risk, like gay people, sex workers etc. The intervention aims at developing some skills in the target population so that they can resist the temptation of high-risk behaviour. These skills are developed through :

1. Risk education and sensitization (for e.g., making them recognize the fact that they are vulnerable to HIV).
2. Self-management training (for e.g., keeping condoms in pocket, reducing alcohol consumption and drug use before sexual behaviour. Drug use before sexual behaviour is associated with unsafe sex).
3. Sexual assertion training (for e.g., being assertive about safe sex when negotiating with partner, learning to say 'no' to unsafe sex).
4. Developing social support networks.

Another influential approach developed by Kelly is the **Popular Opinion Leader (POL)** approach. This intervention approach is based on the philosophy that if a new behaviour is adopted by opinion leaders, they subsequently influence others to adopt the behaviour. For example, visualize your village or your locality. There are certain 'leaders' who are eloquent and have an opinion on every issue. They are often talkative and act as if they know all, from political issues to scientific issues. Other people of the locality attentively listen to these 'opinion leaders' and adopt their behaviour. The POL approach (also called **social diffusion model**) influences these opinion leaders to change their risky behaviours. Behavioural changes in them spreads to other members by social diffusion i.e. by the influence of opinion leaders, other members of the community also change their behaviours.

In one study, Kelly et al. (1991) conducted a survey among gay men in a city. After this, they introduced POL intervention on 43 popular opinion leaders in gay bars. The opinion leaders were trained in HIV-related risk education and skills to resist risky behaviours. They were asked to endorse behavioural changes to their peers. A post-intervention survey was conducted among gay men in the city on comparing the postintervention and preintervention survey, Kelly and colleagues found that the proportion of men engaged in unprotected and intercourse decreases from 37% to 27%. This demonstrates the efficacy of POL approach to intervention.

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4. Harm Reduction Programmes :

Harm reduction is a prevention strategy which does not seek to reduce risky behaviour; rather seeks to reduce the harmful effects of the risky behaviour once the individual shows risky behaviour. For example, HIV/AIDS is transmitted when two people share infected syringes. Many drug addicts share syringes to inject drugs to the blood stream. This is a risky behaviour, and other prevention strategies try to stop this behaviour. But what if drug addicts continue to show the risky behaviour ? You try to reduce the harm. Needle and syringe programmes are aimed at providing new syringes to drug addicts in return for already used syringes. This reduces the harm caused by the risky behaviour (injecting drugs into blood).

Rehabilitation

Till now we have discussed the efforts to prevent HIV infection. But what if one gets AIDS ? The belief of rehabilitation workers is that there is life after AIDS also. Owing to recent developments in ART, AIDS patients can now live for years after getting AIDS. Hence, there is a huge scope for leading a normal life after AIDs. Yet, it is not that easy. The AIDS victims face some psychological and social problems that prevent them from leading normal lives. Rehabilitation aims at resolving these psychological, social and psychosocial issues. Before looking into rehabilitation measures, let us first discuss these issues.

AIDS-related stressors

AIDS is associated with many stressors that lead to psychological reactions. First, there is the issue of facing the truth. It has been found that when an individual receives a HIV positive test report, she experiences a mixture of shock, denial, guilt and fear, as well as dilemma over whether to disclose the illness to others (Ostrow et al., 1989). This acute psychological response is followed by delayed responses such as emotional distress, depression and anxiety.

Since there is no cure to the disease, the victim experiences a loss of control. Due to a lack of control over the disease, the victim may experience learned helplessness and powerlessness. Due to learned helplessness, the individual tends not to take medical help or anti-retroviral therapy (ART). This further aggravates the problem of AIDS.

Many victims demonstrate a **fatalistic attitude.** People with fatalistic attitude, we know, have high need for dependence and don't take any initiative. Due to this, the victims lose the motivation to fight AIDS and lead a normal life.

AIDS is also related to many cognitive reactions. Due to the feeling of guilt, the victim may develop many negative thoughts and beliefs. These negative thoughts and beliefs, in turn, affect their self-concept. The victims develop inferiority complex and a belief that nothing can happen from now onwards. In deed, learned helplessness, dependence etc are due to false beliefs that life ends after AIDS.

Other psychological problems pertain to sexuality and intimacy. Those tested HIV-positive feel guilty over their previous sexual behaviour. They start maintaining psychological and social distance from their family members. Due to this, they don't get the much needed social support and caretaking. Secondly, they lose intimate relations at a time of psychological upheaval.

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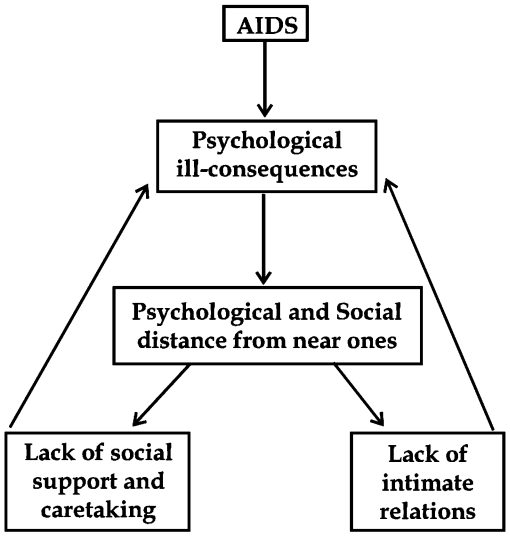
AIDS
Psychological ill-consequences
Psychological and Social distance from near ones
Lack of social support and caretaking
Lack of intimate relations

Fig. : Dynamics of guilt feeling, relations with closed ones and psychological consequences of AIDS victims

Psychosocial consequences

Social stigma refers to prejudices against certain abnormalities. HIV/AIDS is associated with social stigmas. These stigmas vary from society to society and affect the individual victims in multiple ways. For example, in many parts of India, it is believed that AIDS spreads through touch and contaminated water. Due to these prejudiced beliefs, AIDS victims face social exclusion. In Ghana, the AIDS stigma is so strong that women are too secretive about it and don't disclose their HIV positive status to anyone. Because they hide this truth, they don't get access to treatment, and to financial and emotional help (Mill, 2003; cf. Kool and Agrawal, 2006).

Social stigma itself is a psychological stressor. A major coping strategy to deal with psychological problems is to talk about it to others, and receive social support. But owing to the stigma, victims don't get social support. Non-disclosure of information itself leads to anxiety, lowered self-concept and continued fear of getting 'busted' (as if the victim is a criminal !) by society.

Interventions for rehabilitation

A major component of intervention for positive psychological adjustment is **stress reduction.** We have already discussed various stresses that affect the victim of HIV/AIDS, and pose the danger of overwhelming her. Usually, cognitive behavioural strategies are found to be effective to help the individual develop coping skills. Meditation and yoga are also important stress-reduction techniques. Hence, intervention programmes must include session of yoga and meditation.

Many specific intervention programmes have been developed, based on therapeutic philosophies. For example, the Cognitive Behavioural Stress Management Programme (CBSM) developed by Antoni et al. (1991) has been proved to be an effective intervention programme to reduce psychological distress. It is a 10-week group-based intervention programme and includes the following components :

- Cognitive restructuring techniques
- Techniques to build awareness about stress and negative thoughts
- Coping skills training
- Interpersonal skills training
- Relaxation and imagery techniques
- Methods for enhancing social support

Please note that CBSM is a holistic programme that also addresses cognitive

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problems of AIDS victims. AIDS victims often have negative thoughts, false beliefs, fatalistic attitude and suffer from learned helplessness. Cognitive restructuring helps the victim to develop a meaning in life and substitute false beliefs with realistic beliefs about a future inspite of AIDS.

Removing AIDS Stigma

In order to rehabilitate an AIDS victim, we need to provide her with a job and a status in the community. Unfortunately, AIDS victims often lose their jobs and lose their membership of the community (that is, face social exclusion) due to social stigma. Hence, there is a need to remove stigma attached to AIDS. So how do we remove the stigma ? It is a problem of changing people's attitudes and behaviours. One way to change the attitudes and beliefs is through popular opinion leaders (POL) on the lines of POL intervention approach discussed earlier. But its efficacy is doubtful, given the stigma is due to people's fear of contacting the disease. Hence, they would prefer to be on the safe side rather than change their attitude.

Stigma is a prejudice. Prejudice is an attitude. Prejudice leads to discrimination. AIDS as a social stigma leads to discrimination. To reduce stigma, awareness programmes should be conducted. Awareness about the exact nature of AIDS should be created through mass media. Theatre and roadside drama are also mediums to propagate messages regarding AIDS. A cheap and effective method used in many developing countries, like India, is the use of **community theatre** specialists (Kool and Agrawal, 2006). From a survey of some researches, Kool and Agrawal (2006) conclude that awareness programmes are not always beneficial. The benefits of awareness programmes are more when the person can get the information in the privacy of his home, rather than in public places. Hence, Internet may be a more effective medium for AIDS awareness programmes.

Role of Social Agencies

The nodal social agency sponsored by the Central Government of India to fight the AIDS epidemic is National AIDS Control Organization (NACO). 'NACO envisioned an India where every person living with HIV has access to quality care and is treated with dignity. Effective prevention, care and support for HIV/AIDS is possible in an environment where human rights are respected and where those infected or affected by HIV/AIDS live a life without stigma and discrimination'. (NACO, 2008).

NACO organizes its own awareness programs and prevention programs, and provides facilities for ART and rehabilitation of AIDS victims. At the same time, it cooperates with many NGOs that work in the field of AIDS prevention and rehabilitation. Among the many NGOs working in this field, a few can be discussed here.

The AIDS Awareness Group (AAG) creates awareness about HIV/AIDS/Sexually transmitted infections in the jails, red light areas, slums, schools, colleges etc. AAG has introduced awareness sessions and street plays inside Tihar Jail (note that jail inmates are especially vulnerable to AIDS. Due to long duration of sexual deprivation, many engage in MSM (men having sex with men). Such homosexual behaviour is not socially recognized. Nor are the prison inmates

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encouraged to use condoms). Another social agency called Action, Service and Hope for Aids (ASHA) was established in 1998 in Bangalore. It provides the following services :

1. The AIDS helpline and telephone counseling service.
2. Adolescent sexual health education in India.
3. Prevention of mother to child transmission of HIV infection.
4. Awareness of urban slums.
5. Capacity building.

Further details of these programmes are put up on the website http://www.ashaf.org/.

I-volunteers is an unique program, most of whose volunteers are from the IT industry. They are trained in AIDS awareness, after which they reach out to people to spread the awareness through power point presentations, street plays and personal testimonies from HIV positive people.

n Aging and Rehabilitation

A human being faces developmental challenges in every stage of life span. There are challenges that the individual has to face in childhood, in adolescence and in adulthood. No wonder then that there are challenges to face in old age also. However, the challenges faced in old age are quite different from that of other stages. Many of the challenges in old age are quite disabling and the individual may not be capable of recovering from these all by herself. There are social disabilities, physical disabilities and mental disabilities that accompany the process of aging.

Not every individual needs help in old age. A person who has maintained a healthy lifestyle and exercises regularly, for example, doesn't have many physical problems. Yet, some generalizations can be made regarding problems of aging, as under:

1. **Physical disabilities :** The deterioration of physical health starts from the age of 40 years. In the middle ages, muscles become weaker and less flexible. By the age of 70, bones become more brittle and hardened ligaments make muscular movements slower.
2. **Sexual decline :** There is a decline in both fertility and sexual drive in the old age. In the case of women, fertility starts decreasing right from the middle ages till menopause happens at 50. Male fertility often persists for the life time, but it also starts declining from middle ages. There are many psychological correlates of reduced sexuality. Reduced sexuality causes alarm and anxiety in many people. For some people, it is associated with lowered self-esteem.
3. **Stressful events:** Many people in the old age have experienced high stress events like the death of loved ones. The death of a spouse is especially worrying, given that husband and wife are said to form a close bond in old age. The bond of spouses also includes companionship. Since most old people are retired, they find it tough to get companions from younger age groups. Death of a spouse means no companion for most part of the day.
4. **Cognitive decline :** Like other body parts, the brain also declines in late adulthood. The aging brain reduces tissues at a very fast rate. In a longitudinal study, magnetic resonance imaging (MRI) was used to measure the loss of brain tissues among participants who were 59 to 85 years old (Resnick et al., 2003). The study analyzed the

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brain of participants over a 4 year period. The researchers found that over the 4 year period, the participants lost tissues at the average rate of 5.4% per year. It was also found that the rate of loss of tissues was lower for healthy participants.

Old age is also marked by a significant reduction in memory abilities. Perceptual speed, measured by reaction time in the laboratory, declines in old age. Owing to this, the recall and recognition ability decreases. In the case of intelligence, it has been observed that while fluid intelligence decreases, crystallized intelligence doesn't change significantly.

5. **Cognitive impairment** : Disorders of the brain, such as dementia, occur with greater frequency in the old age. **Dementia** is an abnormal brain deterioration accompanied by loss of cognitive abilities. Dementia interferes with daily functioning in the individual. **Senile dementia** refers to dementia that begins after the age of 65. Dementia occurs mostly because of Alzheimer's disease, but can occur due to other diseases like Parkinson's disease, Huntington's disease etc. Dementia leads to problems like :
   - Impaired memory
   - Poor judgment
   - Language problems
   - Confusion and distress
   - Loss of ability to perform familiar tasks.

   Over half of the people diagnosed with senila dementia show a combination of depression, anxiety, disordered thinking and paranoid reactions that resemble symptoms of Schizophrenia (Passer and Smith, 2007, p. 432).

6. **Social disability** : People usually retire at the age of 60-65 years. Even if they do not retire , they don't have the ability to perform upto the mark in jobs. Besides, it is not advisable to work in old age. No wonder, old people don't have any source of income. A few people save money from an earlier age and hence have financial security. But most of the old people are financially dependent on their children and significant others. They are also dependent on others for caretaking. The caregiver is usually a family member. Hence, old people are excessively dependent on social support.

But what if social support is not available ? Many people find it stressful to take care of elderly parents. Still others consider the elderly as a burden. An alternative is institutional living in old age homes. Many studies, like that of Anantharaman (1980) and K. Agarwal and Rastogi (1979), have found that institutionalized subjects perceive more health problems, are less active and have higher alienation scores than those living with their families. This may be because of the deplorable conditions of our old age homes. These old age homes are not well maintained, don't have adequate recreational facilities, and their caretaking staff to old people ratio is very low.

Rehabilitation

Above, we have discussed some problems that an aging individual may face. These problems are stressful and have the potential to overwhelm the individual. Hence, there is a need to rehabilitate the aged. Rehabilitation includes assessment and interventions.

Assessment

When an elderly person shows unusual

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behaviour or can't perform her daily tasks properly, she is referred to a psychologist. Before making therapeutic interventions, the psychologist needs to know the nature of problems faced by the aged individual. The prevalence of depression in older adults who are chronically ill or physically disabled has been reported to be as high as 59% (Knight and David, 2004). Symptoms of depression must be carefully observed, and an assessment of the nature of depression should be made. This is especially important because physicians often can't detect depression in old people.

Secondly, the psychologist also need to know about environmental factors that make the life of the aged more stressful. Has she suffered the death of a near one ? What is her relation with her caregivers ? What are her interactions with her family members ?

Finally, **insomnia** is a major reason for impaired daily functioning. Sleep disturbances are frequent in older adults. Hence, the psychologist should also check if the older adult suffers from chronic sleep difficulties (Knight and David, 2004).

Interventions

An intervention program has to include a variety of therapies, given that older adults suffer from many different psychological impairments. From an evaluation of literature on psychological treatments, Gatz and colleagues (1998) recommend that efficacious interventions for older adults should include Cognitive Behavioural Therapy (CBT) for sleep disorders and cognitive treatments for clinical depression. CBT has also been found to have good effects on older adults with generalized anxiety disorder (Wetherell et al., 2003). Behavioural interventions and environmental modifications (based on conditioning principles) are quite effective to rehabilitate persons with dementia (Gatz et al., 1998). **Cognitive training** should also be imparted as it slows down cognitive decline.

Some alternatives to CBT exist. For example, brief psychodynamic psychotherapy (PDP) has as effective results as CBT in treating depression in late life.

Family based interventions

'Some of the most salient issues in psychotherapy with older adults appear within the family context. Older adults often depend on family members for both emotional and instrumental support. In the event that these family relationships become strained, disruption of support can ensue, resulting in distress for older results. Exploration of older adults' family histories and interpersonal techniques can often inform the therapeutic process in such cases. (Knight and David, 2004).

The focus of intervention here is on contextual factors that may cause stress to the older adult. An effective intervention in this case is **family therapy.** Family therapy for older adults is directed towards caregivers and family members. We must understand that caregiving for older adults is also stressful, and caregivers may at times face distress. Hence, psychoeducation and psychotherapy for caregivers is generally effective in reducing burden and depression, increasing subjective well-being, and increasing caregiver mastery (Sorensen et al., cf. Knight and David, 2004).

Old Age Homes

Another intervention strategy to change contextual factors is convert old age homes into therapeutic communities. Old age homes in India today are facing many problems : they are overcrowded, there are not sufficient recreational

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facilities, caregiving staff strength is low etc. Such an environment affects the subjective well-being of residents of such old age homes. The challenge here is to convert the old age home into a therapeutic community, where older adults get rich stimulation and some interesting work to keep them busy. Here, the role of rehabilitation worker is important but more important is government policy and the motivation of policymakers to help older adults lead a life of health and happiness.

n Juvenile Delinquency

Legally speaking, a discrimination is made between criminal behaviour in adults and minors. Criminal behaviour shown by minors is called juvenile delinquency. The discrimination is made on the basis of the rationale that juveniles are not competent enough to stand trial. They have lower maturity and decision making skills. Hence, the treatment given to them is rehabilitation, not conviction.

We all know that no one is a born criminal. Most criminals are victims of circumstances. In the case of adults, punishment is necessary because criminal behaviour is the result of a conscious and mature decision. But children are unable to take such decisions. Further, it is easier to mend the ways of juvenile delinquents than adult delinquents. Hence the need for rehabilitation.

Causal factors in Juvenile Delinquency

Many causal factors have been identified, that cause juveniles to commit delinquent acts. Many theoretical traditions also exist to explain delinquent behaviour in children. It may be stated that none of the theories can explain all incidences of juvenile delinquency. In deed, most acts of delinquency involve a multiplicy of factors. Let us discuss some dominant causal factors :

1. Predisposition

Some of the earlier theories on juvenile delinquency considered it as the result of predispositions : biological or genetic factor or personality traits that predispose the individual to commit crime. Since it is a predisposition, these individuals show criminal behaviour even in childhood. These theories have largely been discredited today. Some correlation between mental disabilities and criminal behaviour in children have been found, but this is neither a cause in most cases of juvenile delinquency (JD), nor a dominant cause.

Some personality traits that distinguish a JD from a non-JD have, however, been identified. From a literature survey of JD research in India, K. Sathyavathi informs us that delinquents show higher scores on neuroticism, extraversion, impulsivity, dominance, assertiveness, and autonomy. Shanmugam (1980) found from a detailed study that delinquents are low on intelligence, more creative, extraverted, suggestible, and low in aspiration. His study has been described in great detail in his book '*Psychosocial Factors Underlying Juvenile Delinquency*' which is a rich source of literature on JD.

2. Family Factors

Most scholars are unanimous about one dominant causal factor in juvenile delinquency : socialization. Two primary mediums of socialization are family and peer group, and both are involved in causing a juvenile to go delinquent.

Family provides the context that motivates a juvenile to show delinquent behaviour. According to the theory of parent-child

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relationship, how a child's psyche develops depends on the parents' parenting style. Many studies have given evidence that rejecting attitudes of parents, broken homes, lack of cohesion between parents etc are responsible for unsatisfactory parent-child relationship and increase the vulnerability of delinquent acts.

3. Delinquent peer groups

Peer groups always have immense influence in the decisions that an adolescent makes. When an individual is rejected by parents, she feels insecure in the family as a small group. As a result, her attachment to the peer group increases; with increased attachment, influence of the peer group is also high. Many delinquent acts of children like drug abuse, pick pocketing, alcholism etc are the result of being influenced by a delinquent peer group.

4. Socio-Economic Status

An unusually high proportion of juvenile delinquents arise from lower socio-economic status (SES) background. Many psychological reasons interact to create conditions of delinquency in lower SES groups. One reason is that children and adolescents in lower SES groups have higher frustration because of conditions of disadvantage and deprivation. Greater frustration leads to greater aggression, and hence delinquent behaviour. A. K. Tandon and his colleagues (Tandon, Bajpai, Tandon and Shukla, 1978) compared aggressive and non-aggressive delinquent groups in one study. It was found that aggressive delinquents came from low SES families, experienced parental deprivation and showed greater hostility than the non-aggressive group. This study validates frustration-aggression as a causal factor.

Another factor linking low SES to juvenile delinquency is the delinquent subculture. In low SES groups, the cultural values and norms are not the same as mainstream culture. Rather, these groups develop their own norms and values. Hence, subcultures develop. Many subcultures develop in slums of various cities. In many subcultures, crime and violence are justified, sometimes even glorified. A person who commits a big criminal act is appreciated and made the hero. If you were a member of such delinquent subculture, you would be motivated to commit criminal acts not for material benefits but to get praise and appreciation in the group. In one study, K.S. Shukla (1977) had observed that a large number of adolescent JDs in his study were slum dwellers. Many came from families with low parental income and impersonal interpersonal relations among family members. These adolescents felt a loss of status in mainstream society and compensated it by achieving a status in delinquent subcultures.

A third factor linking low SES groups to JD is stress. Children from low SES groups have intense stressors : deprivation, hunger, environmental stressors, crowding, health stressors etc. Some children use delinquency as a coping strategy to cope with these stressors. According to the **theory of escapade,** the many stressors in the life of a child from deprived groups lead to intense anxiety. Some life situations become emotionally intolerable. To escape from such anxiety, they resort to delinquent behaviour. This theory partly explains the behaviour of children who show compulsive delinquent behaviour. Some children steal because it is a compulsive impulse in them. This compulsive behaviour gets reinforced by the fact that it reduces anxiety.

A fourth factor may be that the parents of low SES group children show different behaviour from the parents of high SES group children. Mukherjee (1979) studied parental

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reaction to delinquent acts in three groups. Group I and II belonged to families in a slum area while Group III was from a posh residential area. JDs of all three groups had been apprehended by police for indulging in illegal acts. Mukherjee found that Group I delinquents were largely left to fend for themselves while Group II delinquents threw their children out of homes (if the crime was serious). In Group III, parents made all efforts possible to release their children. An interesting conclusion from this study is that various causal factors like parenting style, peer group and SES don't act independently but are interwoven in a complex manner. Low SES affects not only juvenile behaviour but also parental behaviour. Also, one has greater contact with deviant peer groups in low SES localities.

5. Psychoanalytic Perspectives

Psychoanalysts believe that psychic energy is released from the id. This energy is released from the body by channelling it through various activities. For example, the psychic energy corresponding to sexual instincts (called libido) is channelled and dissipated when an adolescent masturbates. But when an adolescent has been discouraged from masturbating, he has a guilty feeling when masturbating. So he doesn't masturbate. As a result, the psychic energy gets build up in him. This makes his behaviour unstable. The psychic energy may be released slowly by small delinquent acts; alternately, if the boy suppresses the energy it bursts in one time and the adolescent shows extreme violent act.

6. Modelling

According to the Social Learning Theory, we initiate what we see if we are vicariously reinforced by the behaviour of role models. This is true in the case of juvenile delinquents. Many JDs come from families where parents have also shown criminal behaviour, while others model their behaviour in line with their peer group. Media has a deep influence on anti-social behaviour in this regard. The influence of violent behaviours in the media on children is a matter of immense debate and research in psychology. These issues are discussed at great length in the chapter on media psychology.

Prevention

To prevent delinquent behaviour in minors, we first need to identify delinquency prone subjects. Many studies have shown that behavioural problems are the best predictors of JD. Usually parents and teachers ignore these behavioural problems, or punish children for showing such behaviours, misunderstanding the behavioural problems for wilful disobedience and arrogance.

Another sign of future delinquency is **truancy**. Truancy is marked as the beginning of delinquent behaviour. Truants use defence mechanisms of withdrawal, isolation and denial, and their families are characterized by disturbed parent-child relationship (Pandey and Nagar, 1980).

Once identified, what kind of interventions should be introduced for delinquency prone students ? Since most of the problems are due to disturbed parent-child relationships, interventions must aim at mending these relations. Schools should introduce parent-teacher meetings so that parents are included in the academic life of the student. When parents start taking interest in their children's academics, children don't feel that their parents have a rejecting attitude.

Another prevention strategy is to provide counselling services in schools. Many children, especially adolescents, can't cope with extreme emotion. Counselling services provide help to

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children to cope with extreme stressors. Many-a-times, counsellors detect behavioural problems and disturbed relationship with family members from their interaction with the student. They may call up the concerned parent and educate the parent about the issue and how a change of child rearing practice can help the child.

Rehabilitation

As already mentioned, delinquent behaviours in children are due to incorrect socialization. So then what should be the right strategy to rehabilitate them ? **Resocialization.** Resocialization can happen in family, as well as in peer groups. Hence, psychologists advocate two methods : **group therapy** and **family therapy**. In group therapy, groups of juvenile delinquents are brought together and trained in behavioural skills, role taking, discussions etc. In family therapy, the juvenile is retained in the family and the entire family undergoes therapy.

Usually, after the JD is produced in a juvenile court, she/he is sent to a correctional facility for a definite period. In that period, psychological interventions in the form of role modelling, role playing, psychodrama, behavioural modifications, client-centred therapy etc. should be introduced. Unfortunately, the correctional facilities in India are usually not well maintained. Neither are sufficient funds available, nor is the rehabilitation staff that skillful.

Role of Social Agencies

A number of NGOs are involved in prevention of juvenile delinquency and the rehabilitation of delinquents. A few of these agencies and their activities can be discussed here. NANBAN is a social agency that works among street children of Madurai with the aim of their integration with the mainstream. **Butterflies** is a Delhi-based NGO that deals with children – largely victims of poverty, runaways and those who are destitutes and have been abused. The **Vatsalya-Foundation** of Bombay aims at rehabilitation of street children.

An oft mentioned organization in the context of juvenile delinquency is **Prayas**. Prayas provides correctional guidance to juvenile delinquents in New Delhi. It is known for the effectiveness of its education and therapy programmes.

There are many such other organizations in others parts of India. A Google Search and exploration of such organizations and their activities is recommended to the student.

n Victims of Violence

Violent events are high stress events. Though the stress is of short duration, it is unpredictable, and intense and the victim has no control over the event. Such traumatic stressful violence includes rape, terror attacks, riots. The victims are usually those present on the site of violence, and directly affected by the violent acts. But this is not necessarily the case. Terror trauma has been noted in people who have just heard a bomb blast. What is important is that while the actual violent event is of very short duration, the traumatic experience is so stressful that there are psychological consequences.

In a longitudinal study by NGO **Swanchetan** between 2000-2008 among victims of rape, it was found that at least 12% victims of sexual assault did not share their trauma with anybody for 10 years or more. About 70% feared that the offender would return to hurt them again. Around 70% pretended to be alright to avoid talking on the subject. About 65% of the victims had different symptoms of PTSD even 6 months after the occurrence. And roughly the same percentage stated that they had suicidal thoughts

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intermittently for 2 years. The findings of this study reveal the long term psychological impacts of violence.

Today, it is generally agreed among psychologists that Post Traumatic Stress Disorder (PTSD) is a natural response to violence. Of course there are resilient individuals, but the victims of violence are usually common people. Hence, PTSD is a natural psychological reaction to violence. There are other psychological reactions that a victim may suffer from. An immediate response to the act of violence is shock accompanied by denial of the occurrence of the event. These are acute psychological responses to acts of violence. But if the violence persists for long, the victim may jump back to an earlier pychosocial stage (called regression) as a defense mechanism to cope with the stressors. This is called **psychological infantilism.**

Besides PTSD, shock and denial, there are other possible psychological consequences. Women victims of rape and riots experience a reduction in self-concept and self-esteem. Some victims of terrorist attacks may even go into depression. Generalized anxiety may be the result of intense fear that the event may occur again.

Assessment

To provide help, we need to first identify victims of violence who suffer from severe psychological problems. As evident from the study by NGO Swanchetan, many rape victims don't disclose their inner trauma even for ten years and more. Similarly, soldiers in the military suffering from PTSD don't usually seek psychological help themselves because it is associated with a stigma in their peer group. A soldier asking for psychological help is perceived not to be strong-willed and hence his status in his military peer group reduces. In general, asking for psychological help is a taboo in Indian society. Further, victims of violation of modesty can't ask for psychological help because they have a high need to maintain privacy. They need to maintain privacy because the violation of modesty (including rape) is itself associated with stigma towards the woman.

Yet, there are symptoms of trauma that family members and counsellors can identify. Some of these are :

1. Victims get frightening dreams at night.
2. They develop an intense fear of some places. For example, a victim of rape may develop a fear of travelling alone, or of lonely, dark places. Victims of terrorist attacks develop a fear of crowded places, market places and temples. I was in Delhi when the multiple bomb blast took place in September, 2008. A friend of mind had seen the attack at Connaught Place (CP). He developed fear of open space where bombs can be planted ! Surprisingly, not only him, many other people who did not directly experience the terrorist attacks also developed a fear of crowded places.
3. The violent event is so traumatic that the images seep into memory and become a part of the unconscious. The victim compulsively and automatically recalls these images again and again. As a result, the victim relives the traumatic experience many times over. Family members usually don't detect this symptom because victims try to avoid talking on the subject. But professional counsellors talk to the client on the subject, showing unconditioned positive regard and genuineness. By this, the victim gets the confidence to talk out about the images that she compulsively visualizes.

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Once the counsellor detects the existence of PTSD or other psychological problems in the victim, the counsellor studies the type and extent of psychological reactions through interviews or paper-and-pencil tests.

Secondary Prevention

The long-term effects of traumatic events can be countered by giving immediate crisis assistance. Immediate crisis assistance given to victims of violence is also called **secondary prevention.** The prime aim of immediate crisis assistance is to help the victim cope with the shock and traumatic images. For this, **debriefing exercises** are conduced in the hospital (where the patient is admitted), or even near the site of the violence. If an experienced psychologist is not available for debriefing, the victim can be connected to one through telephone hotline.

Another job of secondary prevention is to prevent the victim from recalling the experience again and again. More the number of times you recall a traumatic event, deeper the images of the event goes down. Unfortunately, victims of violence have to give evidence to law enforcement agencies. Owing to this, they have to narrate the whole event again and again to police, to media persons and in court. On an average, a rape victim has to narrate her experience six times. That is why many feminists demand that the first testimony taken by the police in the hospital should be done in the presence of a magistrate.

A major concern with terrorist attacks in India these days is that attacks are becoming very frequent. Yet, there is no policy to provide secondary prevention to victims of terrorist attacks. Those who are injured are taken to hospitals. All others receive no psychiatric or psychological help.

Rehabilitation

After the counsellors have assessed the extent of psychological reactions in the victim, the next step is rehabilitation. Psychologists agree that the best way to deal with a traumatic event is to talk about it with family members. Family members should encourage the victim to talk about her emotional reactions, her feelings. Besides this, family members must ensure that the victim doesn't get exposed to events that remind her of the violent event. For example, TV news reporting about terrorist attacks must not be shown to the victim.

The rehabilitation process of victims experiencing extreme psychological and emotional reactions includes certain therapeutic interventions. **Yoga and Meditation** have been found to be effective in dealing with PTSD. Meditation relaxes the body and proves effective in dealing with emotional reactions.

The **counselling process** is very important in this case. Counselling is important because the victim usually avoids talking on the subject. The counsellor shows compassion and empathy to establish trust with the client. When the counsellor states (as an expert) that what the client goes through is natural, it increases the confidence of the client. She opens up and pours out her grief in the counselling sessions. This helps in cathartic release.

The worst kind of experience after the violence is reliving the violent act. Everytime the victim relieves the experience, she experiences similar strong psychological responses. To treat this, psychologists use **imagery**. The concept is to condition the images of the violent act with relaxation. The victim is asked to visualize moderately traumatic events. Such visualization is accompanied by high arousal and anxiety. The victim is trained to relax her body everytime she visualizes the images. One can't be aroused and relaxed at the same time. Hence, the

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visualization triggers a somatic relaxation response that prevents the psychological response. This process happens in steps till the time the victim is able to relax while reliving the entire violent incident.

In the assessment, if the psychologist finds that the victim suffer from loss of control, feeling of impotence, negative thoughts, depression etc., she may recommend cognitive therapy for the client. Cognitive restructuring of false beliefs like "I could not help it ! I am powerless", "I can't do anything about it", helps the client to make a realistic appraisal of the violent event.

Role of Social Agencies

The role of social agencies is uniquely important for the rehabilitation of victims of violence. The victims of rape and sexual assault can't get regular treatment in public hospitals because of the high need for privacy. PTSD patients usually don't themselves ask for psychological help because of the stigma attached, or because of lack of awareness of help available. In some troubled locations such as Jammu and Kashmir, the number of patients of terror trauma led PTSD are so large that they don't get enough psychiatric help. Hence, the need for social agencies.

Social agencies provide counselling to victims of violence in strict privacy. We have already discussed a research finding of NGO **Swanchetan.** This NGO provides therapeutic assistance to victims of rape and sexual assault in strict privacy. Owing to the privacy clause, many women who have suppressed their trauma for years have come forward to discuss their problems. Another service, popular in USA and now being picked up by some NGOs in India, is to provide **sexual assault online hotline.** This is a form of cyber therapy that uses a secure and anonymous instant-messaging type format to establish communication between victims and trained crisis support volunteers.

Of the many organizations involved in rehabilitation of victims of violence, a name that stands out is **Medicins Sans Frontieres (MSF).** This is an international agency with an active presence in India also. MSF provides relief to victims of violent incidences like terrorist attack, bomb blast, war etc. MSF has a strong presence in Jammu and Kashmir, given that people of the state have been experiencing violent sets of a chronic nature for the last 20 years.

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Psychology Applied to Human Resource Development

4. Educational Psychology
5. Work Psychology and Organizational Behaviour
6. Sports Psychology
7. Military Psychology

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4

Education Psychology

- Psychological principles underlying effective teaching-learning process
- Learning styles
- Retarded students and their training
- Learning Disabilities
- Gifted students and their training
- Vocational Guidance
- Career Counselling vs. Vocational Guidance
- Training for improving academic achievement
- Training for improving memory
- Use of psychological tests in Educational Institutions
- Value Education and Personality Development

n Psychological Principles underlying effective teaching-learning process

The teaching-learning process aims to bring about major cognitive and behavioural changes in the learner: as such there are many psychological theories a teacher can borrow from to make the process more effective. The many theories for children's education are subsumed under three orientations used in psychology.

Orientation	Prototype
1. Individual difference Orientation	Sternberg's theory of Intelligence
2. Developmental Orientation	Piagetian theory of Cognitive Development
3. Social context Orientation	Vygotsky's theory

Besides above, educational psychology derives from other fields of psychology, like :

4. Motivation
5. Memory
6. Conditioning

1. Piaget's Theory and Learning Process

Piaget's theory states that the human infant develops cognitive skills in four stages. In the first stage, called the **sensorimotor stage,** the infant forms a schemata by assimilation of new information from the surrounding and accommodation (i.e. modifying already formed impressions in the light of new evidence). These two processes together are called *equilibration*. The most essential lesson from Piaget's theory is that the child actively interacts with her environment to form mental representations of the outside world. Hence, Piaget's argument was that children need to construct their understanding of the world rather than accept

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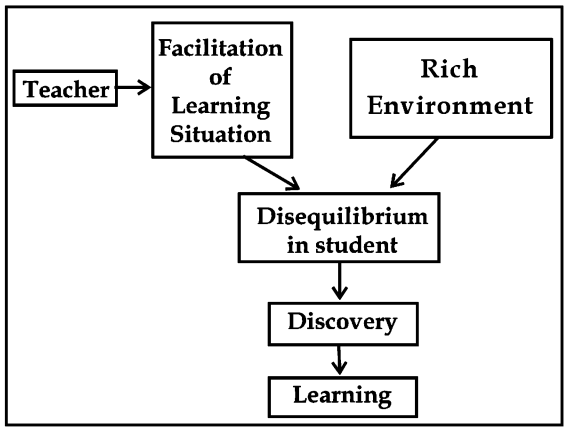
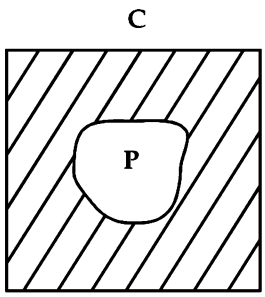
it from others. Both assimilation and acculturation are active processes and can not be achieved in a traditional classroom situation where information was delivered didactically. Hence, Piaget makes a strong case for replacing didactic learning by discovery learning. The role of the teacher is to facilitate learning situations in which children can find things for themselves and thereby construct their understanding. By facilitating learning situations, the teacher creates disequilibrium in the cognition. This disequilibrium should motivate the child to discover and learn.



2. Vygotsky's Theory and the Learning Process

Like Piaget, Vygotsky also saw the child as an active agent of her own learning, but he emphasized on the extent to which learning is mediated by the child's context. *Mediation* is a key concept of Vygotsky's social construction theory, referring collectively to the ways in which culture interacts with cognitive development. Children absorb knowledge about how to behave in certain situations by observing other people. Through a process called **internalization,** they imagine themselves doing the same and when a similar situation arrives, they can emit the same behaviour.

Vygotsky had argued that competence of a child is the maximum limit that it could perform with help from the context. The difference between its competence and actual present performance is called **Zone of Proximal Development.**



C = Competence
P = Present Performance
ZPD = Zone of Proximal Development
= C – P

ZPD represents the potential that can be realized in a child by giving appropriate environmental stimulation. Hence, Vygotsky's conceptualization of the teaching-learning process is that of an interaction between the learner and an adult instructor. The difference between what a child can understand on her own and what it can potentially understand through interaction with others is the ZPD. Vygotsky's theory is influential in the sense that it puts the teacher at the centre of the teaching-learning process. This theory, no wonder, forms a core component of present researches on teaching-learning effectiveness.

3. Intelligence and Learning

Neural development in a human child is somewhat plastic. The neural connections in which electrical activity is frequent becomes

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stronger and larger. These neurons begin to expand, allowing an increasing specialization of functions of these areas. The electrical activity is more frequent in areas which are related to specific kind of environmental interaction. Hence, cognitive skills that are practised a lot become sharp.

Regarding intelligence, it has been found that intelligence is modular i.e. there is no single general factor of intelligence; there are multiple centres of intelligence in the brain and there are multiple abilities that together are called intelligence. Further, intelligence includes creativity and pragmatism. The information processing theories of intelligence claim that increasing experience of the world allows more efficient information processing, allowing greater development of intelligence. Hence, intelligence isn't just inherent but can be developed in every child to an optimal level.

Intelligence theories lend to the field of education the concept of *individual difference in students*. The teacher needs to understand that some students are, to take an example, better in mathematics than others. These students can prepare maths better than others. The teacher has to take care of the individual differences in needs of students when teaching.

4. Motivation

A major goal of the teaching-learning process is to motivate students towards academic achievement. Hence, the teacher has to use various techniques (for instance, goal setting) to keep students motivated. Students also need to be motivated to listen to a lecture : how to make a lecture more interesting? Crack jokes? Give periodic breaks? Or teach through various mediums in order to catch the attention of students' multiple senses? The issue of motivating students is discussed in another section of this chapter. Special measures to motivate students from deprived group background are discussed in the chapter on disadvantage and deprivation.

5. Conditioning

Educational psychology was dominated by behaviourist principles in its early days. Though greater emphasis is given to cognitive school of psychology today, behaviourist principles are no doubt valuable. Conditioning principles are very useful in teaching students with learning disabilities and retardation. Chaining and shaping are especially useful for these students.

Regular feedback and reinforcement of good performance by rewards are some lessons from behaviourist school of psychology. However, there are some cautions. It has been found that extrinsic rewards tend to demotivate intrinsically motivated students as rewards act as justifications for their effort and decreases their motivation. Some warnings about use of punishment are also sounded out. Punishment to change behaviour is discouraged by behaviourists as punishment doesn't teach what to do. It only tells the student what not to do.

6. Memory

The rich research conducted by cognitive psychologists has resulted in greater insight into how information is encoded and stored. Many techniques to improve memory have been forwarded by psychologists for the benefit of teachers. For example, information that is encoded in multiple modalities (visual, verbal etc.) are better memorized. Many such principles are discussed in another section of this chapter.

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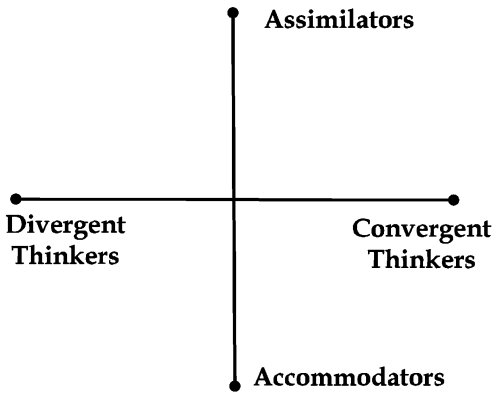
n Learning Styles

"Styles" describe *relatively stable personal preferences* on how information processing is undertaken. For example, a mechanic who checks a car for problems has a style of his in how he goes about doing his work. **Learning styles** refer to all the systems of classifying individual differences in learning. There are individual differences in students regarding how they learn; how they prefer to process information given to them. I am very uncomfortable to study from teachers' notes. Back in my days in IIT Kharagpur, I used to frequently go to the library to study from original books. On the other hand, many of my friends used to note my professors' lecture notes. Some were more comfortable in writing in point form in the exams; others were more graphic and used many diagrams to explain their answers. Hence, there are individual differences in how students learn and express their learnt information. Learning styles include cognitive styles (preferred manner of information processing in any student) and learning strategies.

Literature Survey

From a literature survey, it is evident that there are many conflicting conceptualizations of learning styles without any theoretical framework to connect them. Scholars have proposed a variety of learning styles, many of these often similar but different names make them more confusing to use. Let us discuss a few conceptualizations of learning styles. Kolb (1984) had made an influential early classification of various learning styles into two dimensions :

1. Convergent-Divergent thinkers
2. Assimilators-Accommodators



He had reasoned that any student lies on the above two-dimensional space. I will discuss various learning styles but before that let me discuss other scholars' conceptualizations on learning styles. Entwistle (2000) has given a distinction between *deep processing style* and *shallow processing style*. Going a step forward, Schmeck (1988) had distinguished between three styles on this dimension : deep, shallow and elaborate. There are a myriad other conceptualizations. In a review of literature, Sternberg (Sternberg and Zheng, 2001) recently observed that most proposed learning styles deal with one or the other pole of the following dimensions :

1. Analytic-Wholist
2. Concrete-Abstract
3. Verbal-Visual processing

Let us discuss in detail some of the important dimensions of learning styles :

1. Assimilators-Accommodators

Based on Piaggetian theory, this dimension was forwarded by Kolb (1984). According to him, assimilators process information *abstractly* while accommodators can perceive information *concretely* (other dimensions proposed by various

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scholars like abstract-concrete and active-reflexive are similar to this). Hence, accommodators process new information by activities such as discussion and experimentation. Assimilators tend to manipulate information internally rather than externally. Hence, they can make better use of situations like lectures to learn.

Back in my undergraduate days, I could easily conceptualize how electricity is generated in generators from lectures and books. This was because I was an assimilator. On the other hand, some of my friends never got an interest in lectures. They only understood principles of electrical engineering in the laboratory. A few of them were bugged by the fact : how electricity flows in the wire even when we can't see it ? ! This confusion stayed on with them even after they got their graduation degree ! These students are extreme accommodators. They need concrete information to feel a topic and learn it.

2. Convergence-Divergence

This is a cognitive learning style characterized by two modes of thinking. At one extreme is convergent thinking, characterized by a tendency to focus on a unique solution to a problem. The student following this style usually tries to bring about a synthesis of information. The student follows certain formal rules and bases her problem solving on previously learnt knowledge and skills. At the opposite extreme is divergent thinking. The divergent thinker produces a variety of novel ideas and tries to solve even conventional problems using these divergent set of ideas. Divergent thinkers prefer, and perform better at, open-ended questions that do not have a unique solution. The concept of divergence-convergence is borrowed from Guilford who introduced the concept in 1946. When a teacher measures students on IQ, she basically measures ability for convergent thinking. Divergent thinking, on the other hand, can be measured by tests of creativity.

3. Reflection-Impulsivity

This dimension was first identified by psychologist Jerome Kagan in 1958. Reflection or reflectivity is the tendency to consider and deliberate over alternate solutions to a problem. The impulsive learner is spontaneous and has a tendency to respond without much deliberation. As a result, the reflective student takes more time but comes out with correct answers. The impulsive student gives quick reply but the frequency of errors is high. This dimension is similar to another, called *Sensory-intuitive style.* Learners at the sensory end of the continuum prefer to rely on evidence of their senses in solving problems, whereas those at the intuitive end rely more on speculation, hunches and imagination.

4. Visual-Verbal Learners

Some learners better understand and memorize information received through visual mode while others do it better with information received through verbal mode. Visual learners tend to understand and remember information better when in the form of diagrams, pictures and films. Verbal learners are more comfortable with lectures and discussions.

5. Deep and Shallow Learners

This dimension is derived from the levels of processing theory forwarded by Craik and Lockhard in 1972. Entwistle applied the concept to educational psychology. The learning style shallow or surface learning involves relying on single sources of information and learning key points by rote. Learners adopting a surface

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strategy limit what they study and learn to the strict requirement of the syllabus. Deep learning, by contrast, is characterized by the motivation to understand the topics at as deep level as possible.

At the time when I started preparations for Civil Service Examinations I found that some students rely almost exclusively on coaching institute notes. These students were appalled on seeing a thick textbook and were against reading anything new. These students are shallow processors and would do better with coaching and tutions. On the other hand, many others would go to the library and read new books on the topic, irrespective of whether they are that relevant to the syllabus. These are deep processors and can do self study. Their answers reflect a richness of content and maturity.

Utility of Learning Styles

Psychologists have devised various inventories to measure learning styles and to understand a learner's cognitive styles, strategies and approaches to learning. For example, Schmeck (1988) has devised an inventory to distinguish between deep processing style and elaborate processing style. But the question is, why do teachers need to understand learning styles ? Of what use it is to them ?

The **teaching-learning environment** is a system. In any system, there needs to be a fit between the sub-systems. This system is no exception. So as to achieve a good fit between the two sub-systems, the teacher should understand the strategies, styles and approaches that the student prefers over alternative styles. This helps the teacher to teach students in their preferred style. Some implications of use of learning styles are :

1. Accommodators need to be taught by practicals and experiments. They can't internalize lectures as efficiently as assimilators.
2. A holist (hypothesis-led) strategy may result in smart answers but may be wrong at times. The Serialist learner (data-led) is meticulous but slow. The teacher needs to adjust her teaching speed to both.
3. Visual learners can be better taught with the help of graphs, presentations, PPT slides and movies. Verbal learners, on the other hand, should be encouraged through lectures and discussions.
4. Deep learning should be encouraged among all students with the help of appropriate motivators such as varied sources of study and teaching through varied stimuli.

Learning styles have also been linked to motivation. According to Entwistle (2000), learning styles are a combination of *intention* (or motivation) and *processes*. The teacher benefits from understanding the student's 'processes' as well as 'motivators'. Students are self-regulated when the material taught conforms to their style.

n Retarded Students and Their Training

Because of many genetic, biological and environmental influences on intelligence, no two individuals are alike. There are students at both ends of the intelligence distribution with unusual mental abilities. Those at the lower end are the ones labelled as mentally retarded or cognitively retarded. A note of warning at this point is that intelligence itself is a debatable issue among psychologists even after decades of research; hence it is incorrect to call anyone

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mentally retarded. *Differently-abled* is a more accurate term than mentally retarded because IQ is not a measure of all types of intelligences. Even in the case of severe retardation, many individuals have been found to be exceptionally talented (for example, the idiots savants) in a few abilities.

The focus of the section will be on identification, training and rehabilitation of the mentally handicapped. The concept behind training mentally retarded students is to provide them with a support system that can help them lead a life of dignity and worth. It has been seen that early intervention helps all types of retarded students. Most members of this group are only mildly retarded (IQ : 50–70) and given appropriate social and educational support, are capable of functioning adequately in mainstream society, holding jobs and raising families.

Training strategies for retarded students are multi-pronged, multi-dimensional and necessarily tailor-made for the individual. Here, the psychologist needs to be both a scientist and an artist. Training disabled kids is both a science and an an art. It is a science because it works within the frame of theoretical developments in psychology. It is an art because training has to depend on the trainer's ability to innovate and be creative in training the student.

Various issues dealt by the trainee are :

1. Identification and Assessment of abilities and disabilities.
2. Deciding on Least Restrictive Environment
3. Training for disabilities
   (a) Learning disabilities
   (b) Social disabilities
   (c) Behavioural disabilities
4. Rehabilitation

We will discuss these issues in detail. But before doing so, let us look at some theoretical foundations regarding conceptualization of mental retardation.

Theoretical Foundation

Traditional explanations of disabilities were grounded in superstitious belief systems, and many retarded individuals were abandoned or exterminated. By the 1800s, these explanations gave way to certain quasi-experimental explanations. The year 1801 was a landmark in the history of training and education of mentally retarded; it is in this year that Itard undertook to train and educate Victor, the *wild child of Aveyron*. Victor was discovered by three hunters in 1799 in the forests of Aveyron in France. Most likely abandoned at an early age, he grew up isolated from human contact and stayed naked in the wild. At about the age of 12, he was discovered and several medical experts concluded that the boy was mentally deficient. Itard disagreed, noting that it took intelligence to survive in the wild; his contention was that special education and care would enable the child to develop functional skills.

Itard provided sense training to Victor with special emphasis on communicational and problem-solving skills. Itard didn't seem to be very successful but a student of his, Edward Seguin, devoted his entire life to training retarded students. He developed procedures for working with the mentally challenged within an educational framework.

Since these days, the **medical model** of explaining retardation had been quite popular. The medical model advocated that disabilities originate within the child and are manifestations of underlying biological problems. This faulty view led to incorrect training strategies such as institutionalization. A major problem with institutionalization was that the retarded couldn't get much needed *family support*, nor

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could they develop *social skills*. These people were often *labelled* as retarded whereas only few of them are severely retarded. The mildly retarded, who constitute a majority, can lead a normal life with some special education. For them, institutionalization worsened the problem.

The good news is, there has been a transition from medical model to **socio-cultural and ecological approaches.** These contemporary approaches attribute the causality of disability to the transaction between the demands of the environment and the behaviour of the individual. Also, many psychologists today contend that most educational disabilities are primarily **social construction.** If suppose you test some students of a town school on IQ and find that students scoring under 75 have mental retardation. You now take the IQ test to a school in a tribal locals on the periphery of the town. There, you find that most students fare low on IQ. The fact is that there are so many sub-cultures in the same place that an objective IQ measurement is not possible. Many disabilities are social constructions (i.e. how society defines ability).

Identification and Assessment

Psychologists usually label those children as mentally retarded who get following scores on IQ tests :

IQ	Label
50 - 70	Mild
35 - 50	Moderate
20 - 35	Severe
below 20	Profound

Typically, the process of identification starts with a *teacher referral*. Before giving the referral, a team of teachers and school administrators make a *pre-referral intervention* in which the student's educational needs are fulfilled by special education in the classroom. Overtime, if the term concludes that the student hasn't made any progress with the intervention, the child is referred formally for special education.

Once identified, the mentally disabled student needs to be provided with specialized training. But before training, the trainer needs to assess the student and find out her strengths and weaknesses. The most popular tool of assessment is the standardized IQ test. A problem with this test is that it just gives the extent of disability, not the nature of disability. There are many who are labelled retarded but are exceptionally good in, say, mathematical ability or musical talent. Also, IQ test scores greatly vary from culture to culture and even between sub-culture. If a school has students from mainstream culture and from various sub-cultural groups (e.g. lower castes) the ones from sub-cultural groups may score low on IQ.

A more appropriate test is the *criterion-referenced assessment*. It consists of a hierarchy of tests across several domains, including social skills, communication skills, academic skills and maladaptive behaviour. This assessment helps the trainer to assess which intelligences the student can master better.

Least Restrictive Environment

There are many disadvantages of institutionalization, that is, sending retarded children to special schools with residential facility. Some of these are :

1. The child is cut-off from her family. Family support is not available.
2. The child is unable to learn social skills that would help her later when she is rehabilitated. The scope of integraton with society is lost.

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3. Institutionalization is always attached with social stigma.
4. When mentally retarded students don't get to interact with normal students, normal students don't grow up as humans sensitive to the needs of the retarded. Whereas, if they are in the same school, it has been found that normal students are less prejudiced and more ready to help... this infact increases their sense of empathy.

Institutionalization, in fact, is not necessary for mildly and moderately challenged students; rather, institutionalization harms them by attaching a social stigma. The ideal environment for any student is the one with her non-disabled peers in a normal school. However, there is a trade-off between educational setting and personalized assistance. Hence, based on assessment results, the trainer decides on a Least Restrictive Environment (LRE) in which the student has to be trained. LRE is the educational setting that is closest to the regular educational setting that can still meet the student's individual needs. Hence, the trainer has to choose from a **continuum of services** depicted in the diagram below :

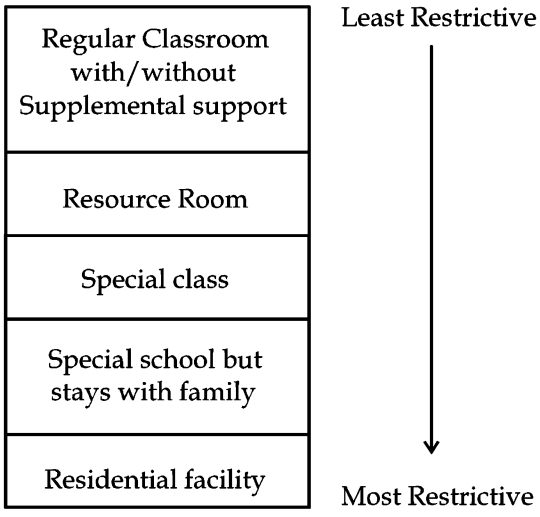

Fig. : Continuum of Services by LRE

If the trainer assesses that the student can make it with regular classroom, it is the best environment. This usually is the case with mildly retarded students. Some special assistance or extra classes for the student may be undertaken. This environment is the most inclusive one; hence, training retarded students in the classroom is also called **inclusion.** If the trainer finds that the retard needs more care, the next option is **resource room.** Here, the student is a member of the regular mainstream school but spends a few hours everyday in a special class under a special education teacher. If the trainer doesn't find this sufficient, the retard is taken out of regular class and put exclusively in a special class consisting solely of children with mental retardation. These special classes have smaller student-to-teacher ratio and usually include some paraprofessionals. If the trainer find that a student's condition is improving, she could put the student back in regular class. This is called **mainstreaming.**

For the severely retarded, it is very tough to place them in regular schools because of the individualized assessment and training that they require. Special school is recommended, though the trainer tries to let the student stay with her family. But if the functional retardation is high, the trainer may recommend a residential facility for the child. This is the most restrictive environment and should be an option of the last resort for the benefit of the retarded student.

Training Needs

The needs of mildly, moderately, severely and profoundly retarded students are quite different. For the moderately retarded, training should include functional skills development by focusing on motor integration, language

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skills and perceptual and motor skills. The ultimate aim must be to give them special training leading to practical help in their day-to-day life.

Arun Sen (2000) of the department of Psychology at Delhi University reasons that more Day Care Centres need to be opened to train moderately and severely retarded students. Day care centres are less difficult to institute and less costly to maintain; also, the family ties are not severed in training in day care centres.

In the ultimate analysis, the needs of no two students with mental retardation are the same. Every student poses novel problems for the trainer. Yet, these skill-retarded problems can be grouped as :

- Learning skills
- Social skills
- Behavioural skills

(a) Learning Skills Training

The first task of the trainer is to figure out the abilities of the student. These students are often expert in certain abilities while they are severely deficit in other areas. The major problems in learning are the student's lack of generalization, motivational problems and unusual styles.

To understand which learning style is best for the retarded student, the trainer should provide instruction through multiple modes. For example, some are visual learners and other learn better kinesthetically. Also, these students have impaired short term memory ability and lower attention span. Teaching them from multiple modes helps to use all their senses to encode information.

Lack of generalization is yet another problem commonly faced. The disabled student may be unable to generalize across settings (e.g. from school to home), stimuli (e.g. verbal instruction to written instruction) or across individuals (e.g. from trainer to parents). Hence, the trainer must teach across settings, stimuli and individuals to ensure that responses learnt under one condition are not replicated in other conditions. (Singer-Dudek, 2004).

Motivational problem is the most challenging of all problems. Most retarded students have a low attention span and low motivational drive. Hence, the teacher should maintain an optimal pace of instruction and must ensure that the student has pre-requisite skills to perform the task. Prabhu and Prabhu have emphasized the need for spaced learning and overlearning in an acceptable environment with sympathy, warmth and understanding. Regular feedback and proper reinforcement (both verbal and material) should be provided.

The teacher also can take the help of developments in Information Technology (IT) to teach the differently abled. **Deepalaya,** an NGO, recently launched an IDU computer centre to help cater to children with special needs. Officials at Deepalaya have found that learning computer skills can be stimulating and funny. Those who have been trained by Deepalaya have developed a new sense of self-confidence and their attitude towards life has become increasingly positive. "The audio-visual medium is a great way to reach/teach children as it helps in better understanding and comprehension as well as retention" says Sashwati Banerjee, executive director of Sesame Workshop India. (Times of India, 21-07-2008)

(b) Social Skills

When mentally retarded students are placed with their normal peers, they face certain problems in adaptation. Many often have difficulties in understanding the rules of

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conversation even though they have sufficient communication skills. They also have difficulty in understanding the feelings and emotions of others. Here the trainer can use techniques such as vicarious reinforcement and observational learning to teach appropriate social skills.

(c) Behavioural Problems

Behavioural problems are most common among mildly retarded children. The problems are usually not because of the retard per se but because of incorrect reinforcement by parents and peers. Behavioural deviance ranges from assaultive behaviour to extreme withdrawal. Some retarded children engage in bizarre behaviour like *stereotypy* (repeating an activity again and again, common in autism), self-talk and self-injurious behaviour.

We know that all behaviours are emitted because of reinforcement. Such behaviours may be emitted because of inability to communicate or attempt to gain attention or escape an aversive task. Stereotype, for instance, is emitted because the behaviour itself is reinforcing (by sensory stimulation). Some other behaviours are reinforced by the attention the behaviour draws.

The challenge for the trainer here is manyfold. Parents don't have an understanding of behaviourist theories and hence misinterpret the behaviour as willful disobedience. Instead of looking for environmental variables to behaviours, they attribute the behaviour to the child's personality.

The trainer needs to work with parents and teachers to modify these behavioural deviances. Functional behaviour assessment is used to identify the antecedents for unusual behaviour and remove them. The trainer also teaches reinforcement techniques to teach the child appropriate behaviour.

Training for Rehabilitation

The philosophy underlying rehabilitation of mentally retarded children is to help them adapt to the community and lead a life of dignity. Kirk (1962) has given certain guidelines about how to train the mentally retarded for rehabilitation :

(a) **Social competence** should be developed so that the retardees can get along with other people. This can be done by conditioning them in numerous social experiences.

(b) **Occupational competence** should be developed through vocational guidance and training. This would help them participate in work and earn their own living.

(c) **Autonomy** can be developed in them by teaching them emotional skills.

(d) They should develop habits of health and sanitation.

It is very tough to rehabilitate the **profoundly retarded individuals** (IQ below 25). They have intellectual capacity of a child of 2–4 years age. Rehabilitation aims to help them look after themselves. Luckily, they constitute only 5% of total population of the mentally retarded. For the moderately and severely retarded children, certain skills have been identified. Sen (2000) argues that they can be trained in simple repetitive jobs under personal supervision. They can be made productive and rehabilitated. Those with mild retardation (IQ : 50-75) are capable of receiving special education and can learn semi-skilled jobs of a routine nature.

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n Learning Disabilities

Learning disability refers to a disorder in one or more of the basic psychological processes involved in oral expression, listening comprehension, written expresson, basic reading skills, mathematical calculation and mathematical reasoning. However, the disability is not learning disability (LD) if the cause of disorder is mental retardation or emotional disturbance.

All the major disorders that lead to LD can be broadly categorized into two disabilities :

1. Reading disability or **Dyslexia.**
2. Arithmetic disability

Dyslexia involves difficulties in phonological processing. Dyslexic students can not make out the relation between letters and sound. They have poor decoding abilities, difficulties in spoken language and poor reading comprehension. Students with arithmetic disability usually have problems in visuospatial processing and in short-term and long-term memory. They face immense difficulty in solving even simple mathematical problems.

The specific problems associated with learning disabilities are generally life long, though many of the problems can be attenuated by instruction and accommodation (Instruction refers to special instruction techniques; accommodation refers to certain adjustment in normal classes to facilitate learning by the LDs). Students with dyslexia can learn to read and can become functional readers. Similarly those with problems in mathematical reasoning can be given special mentoring to do so. However, early detection and intervention is necessary. As seen in the Hindi movie *Taare Zameen Par*, if students with LD aren't detected at an early stage, the parents may misunderstand them and punish them. Punishment often can lead to behavioural problems and depression.

Assessment

Assessment is necessary because it helps to make an estimation of extent of disability and nature of disability. Various popular assessment tests are Standardized Achievement Test, informal reading inventories, and curriculum-based assessment. Since the underlying problems are cognitive, tests of reaction time are also found effective in identification of LD. Specifically, the Das-Naglieri Cognitive Assessment System (CAS) based on PASS model can be used to assess students' learning disability.

Selection of Environment

Going by the logic of least restrictive environment, learning disabled students ought to be accommodated in the regular classroom. This is because of the long-term benefits in development of social skills in them. However, special education in the form of evening classes or sunday classes also help. The point is, accommodation by peers and teachers in schools and special training programmes like perceptual-motor training complement each other in mainstreaming of the learning disabled.

Interventions

Interventions for learning disabilities students include school based interventions and special education and training facilities. Some of these strategies are :

Special Education and Training

(a) Psycholinguistic training
(b) Perceptual motor training
(c) Behavioural modification
(d) PREP

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School based interventions

(a) Effective instruction by teacher

(b) Direct instruction

(c) Peer tutoring

Special Education & Training

Many popular techniques to train students with LD exist with varying degrees of empirical backing. For example, the perceptual motor training works on the principle that children with learning disability have problem in sensory integration as in difficulty to plan and execute motor acts, disorder in form and space perception etc. The idea is that direct sensory motor training can mitigate the disorder.

Behavioural modification makes use of principles of behavioural school. A behavioural analysis is made, then the behaviours that are subject to change are defined, modification routine is followed and finally behavioural changes are analyzed. PREP, on the other hand, is a cognitive tefhnique. PREP stands for **PASS Reading Enhancement Program** and it is based on Das and Naglieri's PASS Model. It is a remedy curriculum designed to improve planning, attention and information processing strategies that underlie reading. A similar curriculum has been developed to help students with arithmatic difficulty.

School-based Interventions

Effective instruction by teachers can go a long way in helping LDs tide over their problems. The teacher should actively interact with students and provide regular feedback. Overlearning can helps. **Remedial techniques** can be introduced to facilitate the learning process of LD students. For example, students with dyslexia can be encouraged to use tape recorders for projects; because of spelling difficulties, consideration should be given to not reducing grades because of spelling errors. Students with arithmatic disability should be allowed to use calculators.

Engelman and Becker, two researchers based in University of Oregon, had developed a technique called **Direct Instruction** to teach LD students. Basically, they had married behavioural modification techniques with classroom instruction to get very positive results. Programs based on Direct Instruction provide explicit, step-by-step guidance for teachers, strategies for correcting student errors, and systematic practice with many different examples.

Peer tutoring has been found to be quite an effective intervention for treating learning disability. In peer tutoring, students work with each other in a one-to-one setting and they alternately take the role of teacher and pupil.

Case Study : The case of Sanjeev

To understand learning disability further, we will now turn to a specific case narrated by Kate Currawala (President of Maharashtra Dyslexia Association) in Education Times (Times of India, 06-10-2008). Is remedial education necessary for students with dyslexia ? Dyslexia affects the normal functioning of the sensory-motor circuits in the brain, with an adverse impact on memory, reading, writing, processing of information and motor co-ordination. The fact that the LD child has to struggle with ordinary, daily tasks has devastating impact on her self-esteem and confidence. Currawala argues that a good remedial intervention programme addresses academic, motor and psychological difficulties and establishes adequate coping skills.

Take the case of Sanjeev who took

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professional help from Kate Currawala as a nine-year old. Although Sanjeev had already repeated a year, Sanjeev lagged behind his classmates in almost every subject. Underlying his poor reading and writing skills were deficits in the visual and auditory processing ... 'Sanjeev was quiet and withdrawn, easily stressed out when faced with even a simple task and ready to give up without much effort. His parents were reluctant to try remedial education because the thrice-a-week regime would leave less time for homework and tuitions'.

But eventually, his parents opted for special education. The special educator gave Sanjeev multi-sensory language instruction to improve his reading and spelling. Through a cognitive enhancement programme, the special education worked on his visual, auditory attention and organisation skills. The cognitive enhancement programme included a series of graded puzzles and activities that built the necessary skills without putting him through stressful academic work. The educator used innovative techniques also; to tackle Sanjeev's impulsivity and low threshold for frustration, he was made to play ludo, snakes and ladders and card games. Gradually, 'as he began to enjoy the tasks and feel more confident of his skills, the youngster actually began to look forward to his remedial session... within a few months, his academic skills also noticeably improved.'

Remedial education holds importance because the special educators work on **basic skills**, which form the foundation for reading and writing.

Conclusion

Learning Disabled students have the ability to grow up and become academic achievers, if they are provided the requisite support system at an early stage. This support system consists of not only the school psychologist and special educators but also teachers and parents of the child.

n Gifted Students and Their Training

Students who have high general mental abilities or artistic skills are called gifted students. These students are deviants in the sense that they differ from normal students in a classroom and need special guidance. Just like learning disabled and mentally retarded students, gifted students are exceptional. While mentally retarded students are at one extreme of the learning curve, gifted students are at the other extreme.

Defining Gifted

There is not much agreement regarding test instruments and assessment procedures to detect and label a student as gifted. Lewis Terman (1925), the developer of Stanford-Binet scale, found from a longitudinal study of twelve year old children that those with IQs above 135 can be called gifted. Although his views haven't been unanimously accepted, there is some agreement that those lying two standard deviations above the mean score of 100 are gifted. In his books 'The Schoolwide Enrichment Model', Renzulli has observed that giftedness shouldn't be confused with success. People who have achieved recognition as gifted possess a well defined set of three interlocking cluster of traits. These three clusters of traits are :

1. Mental abilities
2. Ability for creative problem solving
3. Motivation and dedication

Hence, in contemporary research the stress is not on IQ score (which itself is quite subjective

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and gives culture-based scores) but on common traits of gifted children. According to **Usha Pandit**, an educational consultant with Mindsprings, some common traits of a gifted child are :

1. Thinking, imagination, learning, leadership.
2. Potential to perform in at least the top 5% areas of ability.
3. Good at handling abstract and complex ideas.
4. Boundless curiosity.
5. Sophisticated sense of humour.
6. Ask interesting, difficult or unexpected questions.
7. Skeptical, critical, evaluative and quick to spot inconsistencies.

(Times of India, 22.09.2008).

Do They Need Training ?

As pointed out by Renzulli, not every gifted child becomes successful but every gifted child has potential to become successful. Giftedness is related to mental ability but success is related to many other factors such as motivation and dedication, contextual stimulation to help them realize their potential and proper guidance.

Terman's research had established as far back as 1925 that early grade advancement, acceleration and motivation in childhood helps gifted students to better realize their potential. Hollingworth (1926), among others, has shown that gifted students face motivational and attitudinal problems in regular grade-level classrooms.

In the light of above discussion, I will now turn to the problems faced by gifted children at family and school. This will help us understand what their training needs are. Some major problems faced by gifted children are :

1. **Curiosity :** The gifted children are curious. While this is a plus, it also creates problems. Gifted children often ask many thought provoking questions in the class. As the teacher get frustrated that she doesn't know the answer to the question, she may also think that the student is showing willful disobedience. Often, the prime focus of the teacher is to complete the syllabus; hence she is not responsive to the intellectual needs of the child. Rather, her discouraging remarks may act as a punishment to the student.
2. **Discipline :** Many schools work on the principle of discipline. Precocious students are quite talkative and imaginative. Discipline doesn't suit them as discipline expects similar behaviour from every child. When they break the discipline, (which they do since they are this way) they are punished. Punishment tells them what behaviour not to emit but not what behaviour to emit. This often leaves them frustrated.

   Though I don't claim to be gifted, I used to face immense problems in my schooldays because the teachers couldn't tolerate my curious questions. One teacher had made a rule that I shouldn't open my mouth in her class. And whenever I did (which happened quite spontaneously), I was punished ! Most of my traumatic schooldays I have spent standing on the bench or kneeling down outside the class. Think what kind of impact that kind of treatment has on a child's self-esteem ! The child never realizes where he went wrong, because his behaviour isn't reinforced; just punished. He has a list of DON'Ts but no DOs. And discipline frustrates the giftedness in him.
3. **Teaching method :** Gifted students demand different teaching methods. Highly gifted students learn not only faster than others but also differently. Standard teaching methods

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try to simplify complex subjects; gifted students thrive on complexity. Hence, these students often get frustrated with the teaching method. Some even drop out of the school because they don't find the school sufficiently stimulating.

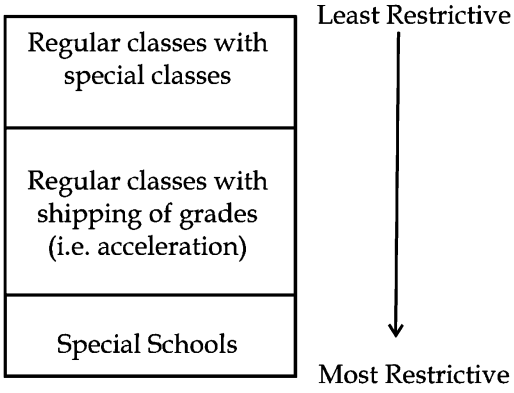
Rote memorization is a standard learning method in school. But gifted students are conceptually driven. If they are expected to do rote mugging, they can't do it. As a result, it is possible that they will be academic underachievers.

4. **Comfort** : Once parents and teachers find out that a child is gifted, their expectations from her are high. They put unusual pressure on the child to perform. This makes the child feel uncomfortable. When I was in fifth grade, I used to write good poems. When my parents realized that I have a talent in composing poems, they pressurized me to write more. I was asked to sing in front of every guest who visited our house. My parents considered me a trophy to be boasted about. Even some teachers patronized me to compose poems for them. Ultimately, I became so frustrated that I stopped writing poems. And you missed the opportunity of living in the times of a great poet ! Hence, the comfort level of a gifted child has to be high. Parents and teachers need to understand this before pressurizing her with expectations.
5. **Multiple Ages** : A 5-year old child may read like a 9-year old, play chess like a 10-year old and talk to toys like a 2-year old. Because the child lives many ages simultaneously, parents and teachers sometimes misunderstand them for being too arrogant, too mature or too childish. They don't understand how to train a child whose various skills attain various degree of maturity.
6. **Social Problems** : Gifted children are skeptical, critical, evaluative and quick to spot incosistencies. Because of their superior skills, sometimes they become arrogant. Most gifted children have problems in adjusting to their social context. They are usually not popular in their peer groups; and they don't find their peers in the peer group interesting.

Interventions for Gifted Students

The first step of intervention is assessment. The assessment doesn't simply mean taking an IQ test. This is because, many gifted students are immensely talented in one area of intelligence and quite average in others. Hence, the task of assessment is to evaluate the exact nature of giftedness.

Further, the school psychologist has to select a suitable educational setting for the gifted students' needs. The strategy should be to find the least restrictive environment subject to the condition that the child is intellectually satisfied. The continuum of services for least restrictive environment (LRE) for gifted students is :



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Regular classrooms treat all students with the same spirit of egalitarianism. This may bore and demotivate the gifted students. Hence, need for special classes to hone her intellectual abilities.

The next stage is **special skill development.** Earlier, a general and homogeneous curriculum was given to all gifted students. Today, specialized programs focus on specific talents. For example, a child with exceptional talent in art can be made to participate in an after-school art class. A student who is precocious in mathematics can be included in a mathematics club. Nowadays, summer camps have become quite popular among parents of gifted children.

Conclusion :

The task of training gifted children is as challenging as the task of training mentally retarded children is. Our world doesn't accommodate differences that easily; both gifted and retarded face a problem in proper person-environment fit.

n Career Counselling

Counselling is face-to-face interaction performed by individuals with specialized training in the field to assist people in having a clear understanding of themselves. Career counselling is based on the philosophy that a satisfying and self-actualizing work life across the lifespan is essential for one to realize her potential and lead a healthy and meaningful life. Career counsellors help clients to :

- Make career choices and adjustments
- Deal with mid-career crisis and transitions
- Optimize work life across the life span

Career Theories

Many psychologists have been involved in theorizing various aspects of career choice made by individuals. Here, we will discuss three important strands of research on careers. These strands aren't contradictory but complementary; they cater to different aspects of career counselling.

Frank Parson's Decision-Making Factors

The fundamental notion that has driven career counselling for the last one century has been Frank Parson's contention that there are three broad decision-making factors in making a career choice. Parsons (1909), who is considered the father of career development psychology, was of the view that three factors should be considered by an individual before taking a decision :

1. Clear understanding of oneself, including one's attitudes, abilities, interests and limitations.
2. Understanding the requirements of the job and job profile (often referred to as knowledge of the *world of work*).
3. Understanding of the relation between above two factors.

Donald Super's Theory of Vocational Development

Super's influential theory brought to the field of career counselling the idea that career counselling is a lifelong process. Career itself gets defined and redefined across the lifespan of an individual. Hence career counselling needs to help the individual in adapting to work life and in undergoing major transitions across the lifespan. Super (1957, 1965) had divided the vocational life cycle into five stages and many

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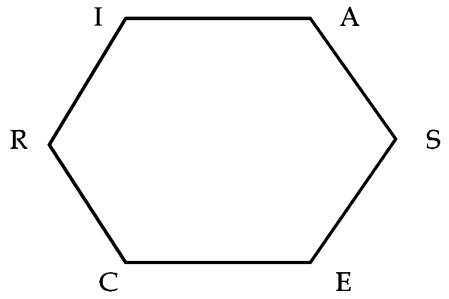
sub-stages. Let us discuss the major stages of his vocational development cycle :

1. **Exploration Stage** (15-24 years) refers to the time when most adults try to make a transition from study life to work life. Most youths explore various fields to decide upon a preferred career. Even when committed to a career option, the individual is only tentatively committed. If the first experience is not rewarding, the individual may shift to another. After graduation, for example, I had joined Tata Steel and had plans to make a career in electrical engineering. Later, however, I decided to go for Civil Services.
2. **Establishment Stage** (25-44 years) starts when vocational exploration ends and the individual is now ready to make a career in an occupational area. While the job is stable, the individual is oriented towards learning new skills and garnering a variety of experiences relevant to the work.
3. **Maintenance Stage** (45-60 years) begins around the mid-40s age. The opportunities for career advancement are now fewer and the major worry of the individual is to retain her achieved status rather than improve it.
4. **Decline stage** begins at the age of 60-65 years. People in this stage prepare to leave the workplace as retirement is closer.

Holland's Theory of Vocational Personality Types

Holland's theory is the most widely used and researched person-environment fit model of career counselling. This theory reasons that people search for environments that best fit their personalities and will derive most satisfaction in finding this fit. He had categorized people's personalities into six types (RIASEC)

R – Realistic
I – Investigative
A – Artistic
S – Social
E – Enterprising
C – Conventional



He arranged these personality types on a hexagon. Distance on the hexagon gets translated into psychological distance. Hence, R-type is closer to I-type and C-type but most different from S-type.

Holland's theory has been extremely useful because it makes the job of career counsellor methodological. Use some interest inventories and attitude tests to assess the client and find what vocational personality type she is. Secondly, study the world of work and divide various jobs into six categories. Third step is to make a proper person-environment fit i.e., match the personality type with the job profile where the client will be best fit to work in. This theory has also been checked across cultures; validated in some while falsified in other cultures. Holland's theory has been found valid among participants of a study conducted by Leong and his colleagues (1998) in India.

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Stage	Approximate Ages	Key Events and Transitions
Growth stage	**0-14**	**A period of general physical and mental growth**
Prevocational substage	0-3	No interest in or concern with vocations
Fantasy substage	4-10	Fantasy is basis for vocational thinking
Interest suhstage	11-12	Vocational thought is based on individual's likes and dislikes
Capacity substage	13-14	Ability becomes the basis for vocational thought
Exploration stage	**15-24**	**General exploration of work**
Tentative substage	15-17	Needs, interests, capacities, values and opportunities become bases for tentative occupational decisions
Transition substage	18-21	Reality increasingly becomes a basis for vocational thought and action
Trial substage	22-24	First trial job is entered after the individual has made an initial vocational commitment
Establishment stage	**25-44**	**The individual seeks to enter a permanent occupation**
Trial substage	25-30	A period of some occupationsl change due to unsatisfactory choices
Stabilization substage	31-44	A period of stable work in a given occupational field
Maintenance stage	**45-65**	**Continuation in one's chosen occupation**
Decline stage	**65+**	**Adaptation to leaving work force**
Deceleration substage	65-70	Period of declining vocational activity
Retirement substage	71+	A cessation of vocational activity

Table : Super's stages of Vocational development. Adapted from Zaccaria (1970)

Career Counselling in Practice

Career Counselling is both an arts and a science. The career counsellor has to provide objective information such as results of interest inventory (so that client can understand herself : this is the first pre-requisite of decision-making according to Parsons' theory) and world of work information (so that client understands requirements of the job : this is the second pre-requisite of decision-making according to Parsons). Hence, the counsellor is a scientist. At the same time, she has to help the client make *subjective decisions* based on above *objective information* and other subjective information that the counsellor gets while discussing the issue with the client. Hence, she is an artist !

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It must be understood that career counsellor is no more than a facilitator, a catalyst. She should not direct the client and let her take her own decision. This is because we are intrinsically motivated to identify and realize our potential. The counsellor's duty is to provide us genuine, sincere vision and objective facts. It is the client who has to find the best career path for herself.

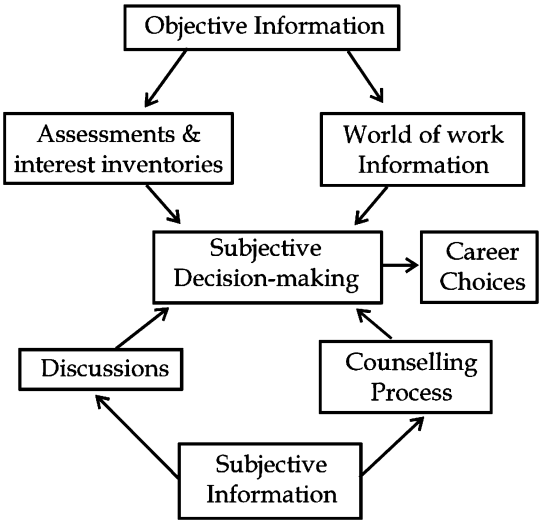

Figure: *Various sources of information in career counselling and career decision choice*

Let me illustrate this with an example. Suppose I go to a career counsellor to assess my career options. I am interested in civil services but am not sure. The counsellor puts me through the following steps :

1. He tests me on Campbell interest inventory and Multiple aptitude tests to know my interests and aptitudes.
2. He gets me information regarding the world of work of a civil servant, what it needs to be a civil servant etc.
3. He finds that I am a generalist. I rank above average on multiple intelligences but not excellent on any one. He finds my preferences from the results of interest inventories. We talk about how much my abilities match the preferred career option I am interested in. Note that I am the one who takes the decision, he just provides non-directive guidance.

n Vocational Guidance

School and college students pursue classes with the hope of getting some job after graduation. They attend classes to enhance their skills in some specialized areas; however, the knowledge gained from academics falls short of the skills necessary to obtain and uphold a gratifying job. Due to this, many graduates do not get jobs; of others who do, about two-third are those who got the job by chance or took the only job available to them. As a result, they aren't usually content with their job. The high unemployment and under-employment rate, as well as high drop-out rates in our educational system and job placement suggests that mere academic orientation is not sufficient in education. Vocational guidance is a solution to this problem. Vocational guidance seeks to guide students, throughout the student life, in learning skills that are pre-requisite for getting a good job and performing successfully in the job. Basically, it seeks to facilitate the transition from school to work. Still, it is not limited to the final year of graduation. Vocational guidance is provided right from kindergarten.

Vocational Development Theory

This theory is the basis of vocational guidance programmes provided in schools and colleges. This theory states that people's idea about

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vocations changes in stages from childhood to adolescence. The two stages and six sub-stages that this theory talks about are :

1. **Growth stage**
   - 1.1 Fantasy sub-stage (0-10 years)
   - 1.2 Interest sub-stage (11-12 years)
   - 1.3 Capacity sub-stage (13-14 years)
2. **Exploration stage**
   - 2.1 Tentative sub-stage
   - 2.2 Transition sub-stage
   - 2.3 Trial sub-stage

In the **growth stage**, children only form images of various vocations and try them out by imagination. In the fantasy sub-stage, students use their imagination to take on different career roles. For example, I had aspired to be a doctor, an engineer, a scientist and a professor variously when I was a kid. In the next sub-stage, they consider various areas of interest. Finally, they become aware of career demands in the capacity sub-stage. The identification of alternatives to choose from hasn't yet occurred.

Real exploration of various vocations starts in the **exploration stage**. When considering various career options, adolescents first choose a tentative career goal in the tentative substage. When the youth works towards aspiring the career goal, she is in transition sub-stage. Once a career goal has been met (by placement or job offer), the youth takes on the job on a trial basis in the trial substage.

Strategies of Vocational Guidance

Vocational guidance programs are generally composed of three levels of assessment. Level 1 assessments are conducted during the elementary school years. The trainers focus on the child's understanding of self, interpersonal skills and decision-making skills. Development of a healthy self-concept and a proper frame of reference are necessary pre-requisites for future skill development. Level 2 guidance is given in high schools. The goal of level 2 is to maintain and encourage career exploration and to assist students in formulating tentative career goals. The guidance team conducts various tests to understand students' interests and abilities.

Level 3 guidance is provided during under-graduation period. A variety of assessment tools are utilized by the counsellor; interviews and observation are also used to understand the student. Two prime objectives of this level are :

1. Determine the training needed to attain post-graduate education or job placement.
2. Determine the skills an individual needs to make a successful transition from school to work.

Nowadays, many professional courses are offered to undergraduate students in various universities. This is done to increase their skills for placement in appropriate jobs. For example, Delhi University provides courses in computers, animation, journalism, marketing and communication so as to improve students' vocational skills. Yet, this is not sufficient. Vocational guidance should start from primary school.

n Career Counselling Versus Vocational Guidance

Career counselling and vocational guidance have similar subject matter, yet are different concepts. In fact, career counsellors are much different from vocational guides in the way they practice and in their strategy and goals. Career counselling believes that for a healthy life and

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to realize optimal potentialities of self, the individual must have the appropriate career over the life-span.

Vocational guidance on the other hand, is concerned with the transition from student life to job life. So as to smoothen the transition, it seeks to train students in skills that will help the student in properly adjusting to job demands after she joins her job.

The aim of career counselling is to help the individual lead a satisfied career life and gain actualization from her career. It is about making the right choice so as to ascertain a proper person-work fit. The aim of vocational guidance is to reduce underemployment and high dropout rates among freshers in industry.

n Training for improving Academic Achievement

There is a stark difference between learning and performance. While *learning* is a relatively permanent change in behaviour and knowledge base, *performance* is the efficiency in completing a task. Tests of academic achievement (like CBSE, ICSE exams) measure performance. The teacher's role is to impart learning as well as to motivate the students for academic achievement. Training for academic achievement includes classroom teaching strategies, and motivation and training to improve memory.

Classroom Teaching Strategies

There are broadly two teaching styles to choose from : **Direction transmission approach and Constructivist training approach.** In direct transmission, the teacher decides what needs to be discussed and learnt. She makes the teaching process more interactive by giving feedback to students and by making the teacher-student communication two way. If the teacher decides to follow the 'direct transmission approach', she can use the following strategies to improve academic achievement :

- Achievement depends on the extent to which the teacher **structures** learning. This can be done through outlines, organization charts and summaries.
- **Practice**, it is said, makes a man perfect. Practicing newly taught skills regularly improves achievement. Overlearning of some key concepts also helps in better academic performance.
- Teacher **quizzing** and **questioning** improves student learning. The teacher should ask clear questions and give the student time to formulate answers. The teacher should also promote divergent thinking and multiple ways of approaching the same question.
- **Feedback** improves academic achievement. Feedback in the form of praise or assertion helps the students know when they are correct.
- Making students work together cooperatively in class work and homework usually improves achievement.

The direct transmission approach has the teacher as the centre of the focus. On the other hand, constructivist training has minimal interference by teachers. The constructivist approach is based on Piaget's ideas. The student is left in environments and situations that are rich in discovery opportunities; students discover concepts for themselves. The role of the teacher is limited to answering questions that may be asked by the students while they attempt a task.

Kohlberg and Mayer (1972) had contrasted

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direct transmission and constructivist views of instruction. They point out that constructivist approach is superior in learning and academic achievement. However, there are certain shortcomings of this approach :

1. The teachers need to be extremely talented so as to answer any question asked to them by the students.
2. Discovery learning is a slow process and the student may take any direction to learn. Hence, there is no definite framework or target.
3. Sometimes the students may make incorrect discoveries. For example, discovering a long solution for a problem will induce them to solve similar problem in same way.

To reduce these short-comings, yet to retain the advantage of constructivist approach, another approach called **guided discovery** is used. In guided discovery, the teacher poses some questions (i.e. guides) when the students start performing a task. The questions are included to direct the students to discover in a specific way. Such guided discovery teaching is also called **Scaffolding**. Like the scaffolding of a building, the teacher supports when needed, with the scaffolding reduced as the child's mental processes, which are under construction, are increasingly able to handle the task.

Which of these is the best training strategy to improve academic achievement ? Most contemporary researchers believe that a combination of instruction learning and discovery learning is the best teaching strategy for higher student achievement.

Motivating for Academic Achievement

Students need to be adequately motivated for learning if their aim is to improve their achievement. Some strategies that can be used to keep students motivated are :

1. **Rewarding Achievement** : Behaviourists believe that to get a favourable behaviour, the teacher should reinforce it with a reward. However, it is not that simple ! When an intrinsically motivated student is given an explicit reward, the student's future intrinsic motivation decreases. This phenomena is called **over-justification effect,** whereby the student justifies her behaviour by extrinsic rewards. For example, suppose a child writes good poems. Suppose his poem-writing fetches him various gifts in functions. As long as the gifts keep coming, its fine. But when the gifts stop coming, the child in fact is less motivated to write poems.

   An alternative effective form of reinforcement is **praise.** Praise works best when (a) the teacher makes clear what was praiseworthy, (b) is sincere and genuine in praising the student, and (c) praises only for desirable student behaviour.
2. **Mastery goal orientation** : As has been discussed in Dweck's theory (see chapter on sports psychology), mastery goal orientation helps the student to strive for the best from himself. On the other hand, ego-goal orientation means that the student always compares himself with others in the class. His motivation may be due to a need for success or a fear of failure ("I will study because if I fail, the whole class will laugh at me"). In ego-orientation, the student can't get the most out of himself... he doesn't

   realize his potential but realize as much as needed to be successful relative to others.

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Hence, the teacher should promote mastery goals. How to promote mastery goals ? By promoting intrinsic motivation to achieve mastery in any skill. To promote intrinsic motivation, the teacher should :

(a) Give some degree of autonomy to the student in trying any task.

(b) Improve the perceived competence of the student by increasing her self-efficacy and confidence.

(c) Show affection, emotional attachment and relatedness to the student.

3. **Encouraging Moderate Risk Taking :** Many students are afraid to take risks because of *fear of failure*. Teachers should promote moderate risk taking behaviour in students as risk taking is related to achievement. You may ask how? Take the case of a child who refuses to try to write fearing that because of her bad writing style she would write miserably. If she doesn't even write, how will she improve her writing skills? I remember, many of my friends in school didn't practice essays fearing that what they write might be miserable. As a result, they couldn't improve and fared poorly in exams.

4. **Pygmalion Effect** : In a classic study by Rosenthal and Jacobson (1968), a test was administered in a classroom and the teachers were informed that few students were exceptional. Actually they were not. However, their academic achievement improved dramatically in a later test. The researchers concluded that this was because of teachers' behaviour towards these students. Teachers had increased their expectancy (expectations) from these students. Pygmalion effect throws light on the fact that teachers' expectation can potently be used to improve academic achievement.

It must be warned at this point that teachers' expectancy is a double-edged sword. Many studies among deprived group children in India have shown that teachers have high expectations from upper caste students and very low expectations from lower caste students. This affected the academic achievement of these students. Hence, removing teacher prejudices and training teachers to be expectant from students is a step towards improving academic achievement of students.

5. **Co-operative Learning** : Co-operative learning refers to any instructional process where small groups of children are formed to maximize each student's learning. Also called *peer tutoring*, this technique has become popular of late because of the strong empirical evidence backing it as an effective strategy to improve academic performance. Many studies conducted on the lines of Sherif's cave experiment have shown that cooperative learning has positive effects on student performance. A major reason attributed for its success is that both learner and teacher are of similar ability and so better appreciate the difficulties faced by each other in learning.

6. **Increasing Self-Concept and Self-Efficacy :** A student is high in self-efficacy if he succeeds once in a while. Otherwise, he may not be adequately motivated and worse, may suffer from **learned helplessness**. Learned helplessness is a situation in which the student has no expectancy i.e. he believes that whatever his efforts be, he couldn't perform. The student develops a fatalistic attitude towards exams. The lesson for the teacher here is to provide lectures that are challenging but not so much as to overwhelm

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the student.

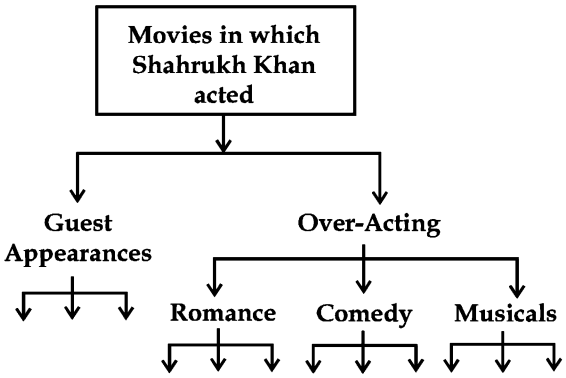
Self-efficacy can also be increased by **modelling**, i.e. by introducing role models who the students recognize with. For example, the teacher can reason that a student of a senior batch was average in studies but finally performed very well in board exams because of his hard work. Role models help in vicarious reinforcement and motivate students to strive for academic achievement.

Locus of control is another major factor in motivating students towards achievement. Students with external locus of control attribute failure to themselves and success to situational factors. Such attribution errors are the result of incorrect self-concept. Jayakanthan, for example, has found a significant positive relationship between self-concept and academic achievement. Hence, self-concept should be developed through personality development programmes. This is especially important when teaching students from deprived group backgrounds.

n Training for improving Memory

Teachers are often concerned about how to present information so that the information is adequately processed and retrieved by the students. Here, they can borrow from the rich subject-matter of cognitive psychology. In this section, we will discuss various psychological principles underlying good memory, how they can be applied in educational settings and their merits and demerits. Some important psychological principles underlying memory enhancement are :

1. **Concepts:** Most of the information that is retrieved by the brain are stored in the form of concepts and categories. These concepts are organized hierarchically. Hence, hierarchical organization of new information by the teacher helps in better understanding of new concepts. For example, suppose the students of a motions picture school are asked to memorize various movies in which Shahrukh Khan has acted. The teacher can organize all information hierarchically to help in better memorization.



2. **Imagery** : Information that is received by the short-term memory can be encoded in two forms: in visuo-spatial form and in verbal-symbolic form. Both ways of encoding are inter-related and it is easier to recall information that is stored as both images and concepts. In fact, the **dual-code hypothesis** states that concrete sentences are more likely to be stored as images, while abstract sentences are coded only verbally.

   The lesson for teachers is that to make learning more effective and to improve memory, both verbal lectures and visual presentations (through diagrams, maps, PPT presentations etc) are necessary.

3. **Mnemonics** : Mnemonic refers to any technique that can be used to aid memory. Most popular mnemonic strategies can be

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represented as POLKA.

POLKA stands for :

P – Peg words

O – Organization

L – Loci

K – Keywords

A – Acronym, Acrostic

In the **method of loci**, one visualizes to-be-recalled items on familiar landmarks. For example, the student can visualize a list of words by linking the words to landmarks that she encounters when coming to school, such as school bus, school peon, teachers, black board etc. In **pegword**, you are required to associate new words to a list of words you already know. The difference between loci and pegwords is that loci is association between items and images; the second is association between items and items.

In the **key word method**, an interactive bridge is formed between the sound of a word and a familiar word. For example, the Hindi word 'Murkh' means "idiot" and sounds like "molar". This way "molar" can be linked to the word "idiot". In **acronym**, you use the first letter of a word as a cue to recall. For example, POLKA stands for the mnemonics discussed here. In **aerostic**, on the other hand, you use the first letters of a phrase as a cue to recall. For example, "Pappu observed Laloo kissing Aunty" is an acrostic that represents the same information that POLKA represents.

4. **Method of PQRST :** PQRST technique is a technique to help students in studying their textbooks and remembering better. Developed by Thomas and Robinson, this technique states that retrieval of information read is more when you study a book by following the five stages :
   (a) P – Preview
   (b) Q – Question
   (c) R – Read
   (d) S – Self-recitation
   (e) T – Test
5. **Other techniques :** Many DOs and DON'Ts about improving memory are derived from various psychological theories. For example, proactive interference occurs when information learnt earlier interferes with information learnt lately and affects memory of recently learnt memory. To avoid interference, the student should sleep immediately after studying. **Overlearning** has been found to be effective on the logic that more you learn an item, stronger the neural connections of that item stored in memory and become stronger the neural connections, faster and easier the retrieval.

Drawbacks of memory techniques

Specific memory enhancing techniques like mnemonics and PQRST techniques ultimately depend on the motivation of the student to use these techniques. Further, no one technique or method applies for all students. Which technique effectively improves memory of a student depends on the student's learning style. A solution to the problem is that the teacher should use multiple techniques at the same time to improve memory. But this doesn't seem very practical as the focus of teaching may shift to memorizing !

Finally, many of the techniques discussed here are heavily student-centric. The teacher's intervention is limited in how a student reads a textbook. He may or may not use the PQRST technique, for instance, when studying, even after repeated encouragement from the teacher.

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n Use of Psychological Tests in Educational Institutions

No two students are alike. The fact that individual differences in students exist necessitates the use of psychological tests for better understanding of the individual child. The idea is to understand the student, her abilities, interests and personality etc. The many tests that are conducted in schools are oriented towards one of the three central orientations of psychology :

1. Individual differences orientation
2. Developmental orientation
3. Social context orientation

Let us now discuss various psychological instruments that are popular in educational institutions, and their utility. There are tests to measure :

1. Cognitive development
2. Development backwardness
3. Interests and vocational leanings
4. School Achievement
5. Students' Social environments
6. Child Pathology

1. Cognitive development :

The oldest test of cognitive development is the Stanford-Binet Scale that defines IQ as comparison between a student and what is considered normal at the age. Today, the most popular scales for measuring cognitive development are Wechsler Preschool and Primary Scales of Intelligence (WPPSI) and Wechsler Intelligence Scale for Children (WISC).

There are many alternatives to IQ testing in order to assess cognitive development. In **Piagetian task testing**, certain phenomena that Piaget attributes to specific stages of cognitive development are examined. For example, whether the child can show cognitive abilities of seriation, conservation etc. **Dynamic testing,** on the other hand, is based on Vygotsky's concept of Zone of Proximal Development. The test is conducted in two phases. In the first phase (also called interaction phase), an adult familiarizes the child with a task, gives hints about how the taste could be completed and motivates the child. In the second phase, actual testing takes place in which the child's performance is checked. Basically, dynamic testing tests the competence of students i.e. their ability to perform with support from teachers.

Some tests measure the reaction time of students. These tests are based on the assumption that being intelligent involves being able to process information quickly. Many studies (for instance, Mohan and Jain, 1983) have shown that speed can be taken as an index of intelligence. Reaction time measures many cognitive faculties such as Short Term Memory, iconic memory etc. Anima Sen and Arun Sen, the most prolific researchers in the area of mental retardation in India have successfully used tests based on reaction time to assess mental retardation.

2. Development backwardness :

Not all students pass through Piaget's stages at the same age. It is necessary to test the students with developmental backwardness so as to decide on any remedial education for them. Many psychological tests are specifically designed for this purpose. For example, the Denver Developmental Scale is used to screen any deviance in normal development of children. Many other tests have been devised to test backwardness in

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language development, moral development etc.

3. **Interests and vocational leanings :**

Students study with the ultimate expectation of landing a job that would suit their interests and vocational leanings. Career decisions are tough to take and many-a-times the student is not sure what to do. These days, schools take the service of vocational psychologists to help the students understand their interests and preferences. Some major interest inventories used in schools are the Strong Interest Inventory (SII), Kuder Occupational Interest Survey (KOIS), Campbell Interest and Skill Survey (CISS) etc. The Self-Directed Search (SDS) and the UNIACT Interest Inventory are two tests based on Holland's Six RIASEC dimensions. The utility of these tests have been extensively supported by empirical research. Many studies have confirmed that interest inventories effectively differentiate and predict important career behaviours. These tests are useful to decide which field to specialize in, which elective subjects to take and what vocational skills to develop for job placement.

4. **School Achievement :**

To get an admission into higher studies in western countries, one has to give the Student Achievement Test (SAT). SATs are useful in placing children in various educational level. In India, we have entrance examinations for various engineering colleges and medical colleges; these examinations test students less on achievement and more on ability. **Ability tests** are *predictive tests* that predict performance in the future. Standard tests to measure ability also exist. For example, the Differential Aptitude Test (DAT) measures a student on nine different abilities.

5. **Students' Social environments :**

Students are deeply affected by their peer groups. Students tend to nominate peers with whom they would like to play. Due to this dynamics, there are three types of children in school : popular, unpopular and neglected. School relationship instruments, such as **Moes's Social Climate Scale**, try to assess the social status of a student in school peer groups and throw light on peer group influence on the student. For example, if a student is found to be a loner, teacher intervention can be suggested to make him more acceptable in student circles.

More than peer group, the family affects a student's psyche. Hence, several questionnaires have been devised to measure parental styles : authoritative, authoritarian, rejecting or laissez-faire. These questionnaires help the school psychologist understand family factors behind any maladaptive behaviour of the student; and give suggestions to parents, if needed. School psychologists also use psychological tests to measure the school environment, that is, how the school environment fosters well-being, achievement motivation and confidence in pupils.

6. **Child Pathology :**

Childhood pathology can be measured by Acherbach's Child Behaviour Checklist (CBCL). Beck's depression scales have been remodelled for children and named Kovacs's questionnaire. It allows us to identify clinical cases of depression in children. The Attention Deficit/Hyperactivity Disorder (ADHD) is a test to measure lack of attention and impulsivity among children in the age group 4-18 years.

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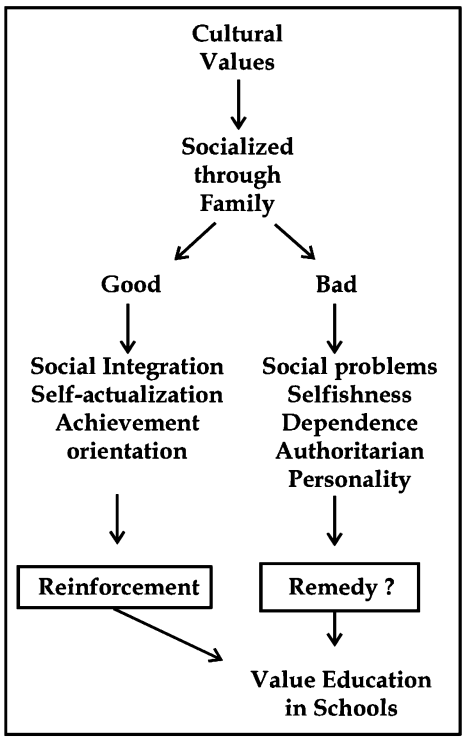
n Value Education and Personality Development

Value refers to a mode of conduct (means) or **end** state that is personally preferable to an alternate mode of conduct. Hence, values affect our behaviour by defining goals (end state) and means to attain the goals. Values form a basic part of our personality structure and hence develop very early in life. Unlike attitudes, it is very tough to change values... they are much more permanent, once formed. Hence, there is a need to foster proper values in children. **Value education** refers to training children in proper values at school for healthy personality development.

What are proper values, and why is it necessary to foster these in schools ? There are three types of values :

1. Universal values



2. Cultural values
3. Personal values

Universal values are highest order values; they relate to sensitivity for humanity, love, brotherhood, compassion and empathy. These need to be developed in children so that they can grow up to become responsible citizens and humane creatures.

Cultural values are the values that are influenced by family and significant others. For example, in Indian society, a caste hierarchy exists. A.K. Singh has found that caste and religious identity become prominent in Indian children at an early stage. Due to this some, cultural values (ex. "I am superior to Hari because I am Brahmin and he is Vaishya") get socialized into the child's psyche. This is dangerous. Hence, there is a need to teach proper **cultural values** in schools.

The values that one learns in one's family are specific to his/her sub-culture (Brahmin sub-culture, Muslim sub-culture, deprived groups sub-culture etc). These are not conducive for **social integration**. Hence, the need for value education in schools.

Personal values are those which affect an individual's motivation and striving for success. Basically, this is the most important category of values for personality development. What is your level of motivation? What motivates you? Entrepreneurship? Fame? Self-actualization? Success? Money? Altruism?

Value education in schools can follow several strategies. A few strategies are :

1. **Development of Collectivistic Values :**

   In western society, the individual is viewed as distinct from the collective. The "self" is clearly differentiated from society. Hence,

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there is a need for sensitizing the individual towards society. Fortunately, Indians have a collective orientation. Hence, our cultural values promote sensitivity towards society. The self ("atman") is part of the whole ("Brahman"). Schools need to reinforce these values. Specifically, a sensitivity towards diversity of Indian society needs to be instilled in children.

2. **Reflexive thinking :**

Rational, logical thinking is essential for proper personality development. Independent thinking helps the child develop into a logical person. This frees him from the dogmas of society and helps him in taking proper judgments and decisions.

Reflexive thinking can be fostered in children by promoting creativity, encouraging initiatives by children, assisting in rational decision-making etc. Unfortunately, many teachers don't encourage creativity. The prime aim of most teachers is to strictly follow the curriculum; hence they discourage children from taking initiatives. Proper guidance by school is essential at this stage.

3. **Removal of Prejudices :**

Values are more permanent than attitudes. Hence, an incorrect attitude can be changed but an incorrect value can't be. As pointed out by scholars like A.K. Singh, most Indian children get a caste identity and religious identity very early in life (refer the chapter on prejudices and social integration). Parents promote prejudices against other castes and religions, which get embedded in the value system. This leads to a rigid and authoritarian attitude (negative) towards other communities.

Hence, removal of prejudical values is a part of value education. Equal status contact in schools should be enabled... this can be done by admitting students from various background. Superordinate goals should be set by clubbing together students from varied social backgrounds in group projects. The **jigsaw puzzle** is a good example of how values towards diversity can be fostered (see chapter on social integration).

4. **Personality development :**

Personality heavily depends on the parenting style of parents. If parents show a rigid parenting style, characterized by rejection of the child and neglect, the child may develop authoritarian personality. This, and other personality problems arising out of child rearing practices, can be ameliorated in school education. However, it depends heavily on the kind of relationship the teacher develops with a child. If the teacher shows unconditioned positive regard to the child, and is warm and affectionate, he/she can greatly influence the future course of the child's life.

Problem here is that Indian schools have a very high student-to-teacher ratio, due to which teachers can't give personal attention to each student. Hence, a student counsellor or school psychologist must be appointed to look after the welfare of students who show extremes of behaviour (like withdrawal, depression etc.) (The movie "Taara Zameen Par" depicts one such case where interpersonal relation between a teacher and a learning-disabled child helps the child not only overcome his dyslexia problems but also his lost confidence !)

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5

Work And Organizational Psychology

- Personnel Selection
- Training & Human Resource Development
- Sensitivity training
- Use of Psychological tests in Industry
- Theories of Work Motivation
- Leadership
- Transformational leadership
- Participatory Management
- Managerial Effectiveness
- Stress and its management
- Consumer Psychology
- Ergonomics
- Power & Politics in Organizations

n Personnel Selection

Recruitment of personnel is an activity whereby candidates who would best match a task, the team at the workplace and the organization are selected by the company for employment. In this, the work psychologists and HR personnel use certain selection criteria to predict the future performance of a candidate on the job. Hence, it is a process in which predictive validity of the selection criteria determines to what extent selection has been successful. Various outcomes of the validity of selection criteria are :

	Rejected	Selected	
Performer	Miss	Correct Selection	Candidate Ability
Non-Performer	Correct Rejection	Wrong Selection	

Selection Criteria

The aim of a work psychologist is to maximise "correct selection" and minimize "wrong selection" (or "false alarm"). Recruitment typically follows the following steps :

1. Job Analysis

Job analysis is an activity that enables the work psychologist to define the job specifications. It includes a combination of methods : existing employees who work on the particular task can be **interviewed**. **Observation** of the job gives insight into behaviours that are expected of the prospective employee; Biodata of existing and former employees who have worked on similar jobs can be of help in getting an idea about what should be the background of a candidate for the job. For example, a company has found that students from IIT Kharagpur are much more efficient than that of IIT Kanpur in doing a specific job. It may be because of the excellent laboratory facilities in IIT Kharagpur but this the HR personnel infer from study of biodata of existing employees.

Also, work psychologists study the amount of group activity that the task involves. If the task needs to be performed by a team, the **interpersonal skills** and emotional intelligence need to be assessed also.

Furnham (1997) believes that a job analysis should provide details of the **minimum professional knowledge** that would be acceptable for the task, the **basic skills** needed to perform the task and the ideal **personality**

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traits that the prospective candidate must have to fit into the job.

These three items can be referred to as :

1. Knowledge
2. Skills
3. Attitudes

2. Selection of Criteria

There is no absolute method of scan out wrong selection and zero in on the deserving candidates. Based on job analysis, a decision criteria is drawn; this criteria specifies what knowledge, skills and attitude should be minimally present in the right candidate.

3. Selection of Instrument

After deciding on the cut-off of knowledge, skills and attitude, now the task is to measure these three properties in an individual. For this, a variety of instruments like application blanks, psychometric tests, interview and aptitude test are used. All these are discussed in detail in the next section and the student is suggested to read the tests in the light of present discussion.

A major challenge in selection of instruments is that some instruments (such as interview) are very subjective. These tests have low validity.

4. Recruitment proper :

Candidates are invited to apply for the vacant post through application blanks. The application blanks ask for biodata, a reference and academic grades. Biodata throws light on the skill-set of the candidate; references on her personality and attitude; and academic grades help assess her knowledge.

After an initial screening based on the application blanks, candidates are called and selection instruments are operated on them. Their performance is assessed and final decision is taken before intimating the results to them.

n Human Resource Development and Training

Simply stated, human resource development refers to a focus on increasing the skills and resources of humans – in this context employees. Human Resource Development (HRD) today is an important philosophy of organizations because of the simple reason that in these changing times organizations have to continually upgrade their human resources (skills, knowledges etc. of employees) to meet challenges of changing times. Intrinsic here is also the philosophy that better human resources means better resources at the disposal of the organization.

Pareek (1991) defines HRD as – 'a new systematic approach to proactively deal with issues related to individual employees and teams, organizations and a movement to develop organizational capability to manage change and challenge'. HRD includes training of employees but doesn't exclusively consist of training. Training of employees no doubt contributes to human resource development, but training is a one-time activity (during recruitment and from time to time), but HRD encompasses a vast array of systems that lead to enhancement of human resources.

In this context, it is appropriate to understand HRD as a matrix so as to understand the range of HRD. HRD is a continuous process and it encompasses many human units and systems. Pareek (1991) has referred to six human units as the foci of HRD :

1. Individual employee
2. Role
3. Dyad
4. Teams
5. Inter-teams
6. Organization

He has also identified six HRD systems of activities :

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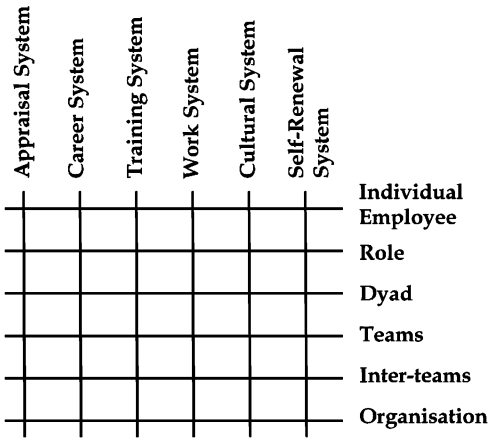
1. Appraisal system
2. Career system
3. Training system
4. Work system
5. Cultural system
6. Self-renewal system

These two axes together form a 6 × 6 **HRD matrix.** In this section, we will discuss training and career systems in detail. Other systems have been covered in other sections of this chapter. For example, appraisal system is discussed when discussing psychological tests for employee appraisal, work system is dealt with in power, leadership and ergonomics chapters.

HRD In India

Human Resource Development (HRD) is an all-encompassing concept. While it can be narrowly defined as efforts to improve the skill sets of employees, a more broad definition includes all efforts to optimize human units and processes. Given the fact that HRD is a concept with such wide connotations, obviously cross-cultural variations would exist in the interpretation of HRD. Hence, a need to situate HRD in Indian context. In this section, we will deal with the concept of HRD as understood in India, and look into an appraisal of HR development in practice in India. For this purpose, I have referred to an excellent essay, HRD in India : Prospect and Retrospect written by Prof. Udai Pareek back in 1991. I have shamelessly summarized the theorization of HRD and appraisal of HRD in practice in Indian organization as discussed by Prof. Pareek in this essay.

Prof. Pareek basically adheres to a very broad definition of HRD. The centre of his focus is not just employees but also other human units like teams and dyads. Further, he talks about six systems that influence the human units (also six in number). Hence, he presents a "HRD Matrix" a 6 × 6 matrix of six human units cut through by six systems. This HRD matrix can be represented as in the figure. The definition presents us with a framework within which we can assess HRD in India. Let us now proceed to this exercise.



The Human Units

1. The Individual Employees

The individual employee is the most basic unit of an organization. No wonder, it also is a key unit of emphasis of HRD. The development of individual employees typically has three important elements : **self-management, competence building and advancement.** Competence building refers to the development of professional skills in the individual. Self-management refers to the development of skills that would enable the individual to manage her emotions, to set realistic goals, analyze one's own performance etc. Advancement refers to

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career prospects of the employee in increasing age and experience, the employee develops new competencies; hence the need for a career plan. This also is the responsibility of the HRD.

2. The Role

Every employee has some status in the company. She has this status with respect to other employees (superiors, colleagues, subordinates etc.) who interact with her. Every status is accompanied by certain expectations regarding the role the employee has to perform. These role expectancies define the role of the employee. This is an important human unit. If the role is neglected by HR, or is not suitably defined, the role becomes ambiguous. Ambiguous roles are accompanied by high stress and lower performance. Hence, the need to develop roles. Three main aspects of development of roles with which HRD is concerned are :

- Optimum stress
- Autonomy
- Linkages

We have seen in another section in this chapter that too low stress or too high stress are detrimental for optimal performance. Hence, a need to ensure that roles have optimal job demand and average level of stress. Also, greater autonomy should be provided in role performance to those employees who want to take initiatives. Autonomy should also be attached to those posts where role demands a creative nature of work. Thirdly, linkages between various roles should be build. This is important because the goals attached to individual roles should converge and the individual employee should understand the role of her job in fulfilment of organisational goals.

3. The Dyad

Prof. Pareek defines a dyadic group as an employee and his supervisor. A dyadic group is the basic building block in an organisational structure; hence, Prof. Pareek stresses that the stronger the dyads, the stronger the organisation will be. The role of HRD in building strong dyads includes three elements :

- Trust
- Mutuality
- Communication

Trust between an employee and her boss necessary for work to be smooth. At the same time, mutuality (i.e. a helping relationship in both members of a dyad help each other) between the employee and the supervisor strengthens the relationship in the dyad. Finally, to develop strong dyads, effective communication between the two employees should be built.

4. The Teams

Many dyads together form a team. For example, suppose a software company has got a consultancy assignment. The assignment is dealt by a project manager (PM). Under him, there are two senior software workers (SSW) and under each SSW, there are twenty junior workers (JW). So (PM → SSW), (SSW → JW) are various dyads. But together, the PM's team works on a common goal. Hence, the dynamics of these groups need to be monitored by HR and healthy team climate needs to be developed.

The criteria that HRD should focus on, according to Prof. Pareek, are cohesion and resource utilization. Teams should be cohesive and should product synergy. Effective teams are those that are able to best pool together resources at the disposal of individual employees and utilize same.

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5. The Inter-teams

In many organizations, much of the resource is wasted because of lack of coordination between various teams. The marketing team may, for instance, demand goods of a certain quality but the production team may be more concerned about quantity, and may even be ready to compromise with quality. Hence the need to develop cooperation amongst various groups in the organisation. Departments, divisions and functions should be targeted to develop cooperation towards fulfilment of common organisational goals.

6. The Organisation

HRD activity with respect to the organisation as a whole should focus on (a) growth, (b) impact and (c) self-renewal. Growth is the perpetual motivation of any organisation. Any organisation that doesn't grow becomes stagnant, and may decay. Hence a focus on growth. But growth on accepted lines doesn't always proceed smoothly. Owing to fast changes, a need for self-renewal may be felt. The HRD must organize activities to brain storm on the working of the organisation and how to better the standards. HRD also focuses on the impact the organisation has on outside entities such as other organisations, customers etc.

HRD Practices in India

Now that I have discussed the six human units, that are catered to by HRD. Let us now discuss various HRD practices in India. Prof. Pareek provides a six-fold system classification of HRD practices in India which are discussed as under :

1. Appraisal System

Appraisal of an employee's performance (or potential) helps the HR to understand the employee better, and dole out rewards in the form of bonuses. At the same time, appraisal system provides a feedback to the employee regarding her performance. There are three main appraisal systems :

(a) Performance appraisal

(b) Potential appraisal

(c) Performance coaching or counselling

Prof. Pareek observes that most Indian organisations have focussed only on performance appraisal. However in the absence of other appraisal systems, performance appraisal has been reduced to just a mechanical exercise. Potential appraisal, which is the appraisal of the employee's potential to do new work, and counselling to develop good skills are other systems of appraisals which need to be implemented to complement performance appraisal.

2. Career System

A major component of human resource development is career system. Work career is an important part of adult life. The adult employee passes through several developmental phases within her job life. Hence, the need for a career system to help the employee sail through developmental phases (For more details on developmental phases, refer to Super's theory).

Three broad components of career systems are :

- Experiences
- Opportunities
- Career planning

Experiences are most useful for an employee at an entry point. Experience is necessary for employees to move up in the organization; hence there is a need for HRD to make concerted efforts to expose the employee to various types

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of work. These days, many Indian companies are pursuing activities like on-the-job training and job rotation scheme to expose employees to varied experiences.

But so that an employee can prove herself, she needs ample opportunities. It is the role of the HRD to design an organization structure, so that an employee with ability has opportunities to take more responsibilities as she matures. Career planning is involved in charting special career paths for individual employees.

3. Training System

The training system is one of the most well defined elements of HRD. Since HRD traditionally focuses on skill development, training is central to HRD. Unfortunately, 'it is being very inadequately treated in most organisations. Attention to identification of training needs, preparation of a training strategy, development of a training method (pedogogy), curriculum designing (to meet specific needs), evaluation, follow-up and post-training support, are all important components of a good training system. Although training is extensively used for human resource development and large budgets are spent on training, on the whole, training is not taken seriously'. (Pareek, 1991).

A career system which is fast gaining popularity in Indian organizations is mentoring. In mentoring, an entry level recruit is annoited to a senior officer who guides the recruit in matters of career, and also personal life. When I was in Tata Steel, I had been provided with a mentor who helped me with many issues that I couldn't have confided with others. Prof. Pareek observes that this is based on the Indian guru-shishya relationship. In many other organizations, a buddy system is also used where the mentor isn't much older to the employee. By this, the employee gets someone of her eye group, she can confide to. In National Academy of Direct Taxes (NADT), where I am presently undergoing training, one faculty member is appointed as counsellor to eight trainees. The counsellor is always accessible to the trainees.

4. Work Systems

Work systems is not covered by the traditional, narrow definition of HRD. However, Prof. Pareek strongly believes that HRD must deal with at least four aspects of work systems:

- Task analysis
- Quality of working life
- Productivity
- Role stress

Task analysis refers to an analysis of the psychological and physical traits needed for an employee to perform a specific job. Task analysis is hinged on the logic that maximum efficiency is achieved when a proper person-environment fit (her, employee-work fit) happens. Productivity and role stress are two related topics. While productivity depends on employee motivation (again how to motivate employee is decided by HRD), role stress happens due to a variety of reasons discussed elsewhere in this chapter. Finally the quality of work life affects both employee motivation and role stress. Prof. Pareek argues that in improving the quality of work life, factors like participative management, workplace democracy, autonomous work groups etc. have to be introduced. Other new introductions in the field of work systems include stress management, introducing quality circles etc.

5. Cultural Systems

Prof. Pareek defines organisational culture

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as 'cumulative ways of thinking and behaving shaped by the values, attitudes, rituals, and sanctions in an organization. Operationally, development of culture would involve developing a strong corporate identity, development of important values, building healthy traditions and developing consistent management practices.' (1991) Cultural systems, which cater to the development of appropriate organisational culture, are the most neglected part of HRD.

Many Indian companies have adopted organisational culture practices of Japanese companies and have benefited from it. However, it must be kept in mind that an organisational culture that suits organisations of a country is different from that of culture of organisations elsewhere. There is a need to study in greater depth the organisational culture that would best suit Indian organisational climate.

Some recommendations for development of culture, mentioned in Prof. Pareek's paper, are:

- Development of strong corporate identity.
- Developing important values and ethics.
- Building healthy traditions and practice, such as induction programmes, promotions, exit policy, retirement policy etc.
- A robust communication system, whereby employees placed variously in the company hierarchy can communicate with each other.

6. Self Renewal Systems

An organisation should be concerned with both growth and its health. As it faces new challenges with changing times, there is a need to renew the organisational focus. Hence, a major job of HRD professionals is organisational development (OD). The focus of OD is 'on developing process competency to increase organisational effectiveness. Organisation Development aims at maintaining profiles of organisational health, monitoring organisational health, assisting sick departments, helping interested units and departments in self-renewal, conflict management, creation of strong teams, and so on, and establishing processes that built a climate to promote enabling capabilities in the organisation'. (Pareek, 1991)

Towards Conclusion

HRD is a very contemporary and vibrant field of activity. The student is recommended to stay up-to-date with research scholarship on this topic in various journals. As of now, the prime debate is whether to evolve HRD according to the Indian culture, or to adopt successful forms of organisational practices from abroad ? Most researchers say, from their experience, that elements of our own culture should be explained, but good practices of other cultures should also be promptly experimented with.

TRAINING

The theoretical skills that a student learns in her university aren't of significant use in the industry. Even if an employee can be directly inducted for skilled job, she may not perform optimally. Hence, the need for post-recruitment training. Besides this training, the need for training arises everytime a new technology is introduced or when the employee is given new responsibilities. In case some employees rise to managerial positions, their task becomes more of a challenge in managing their subordinates. Hence, the need for managerial training. Finally, the HRD philosophy is that HRD is a continuous process and the employee's skills need to be updated from time to time, keeping it in line with changing times.

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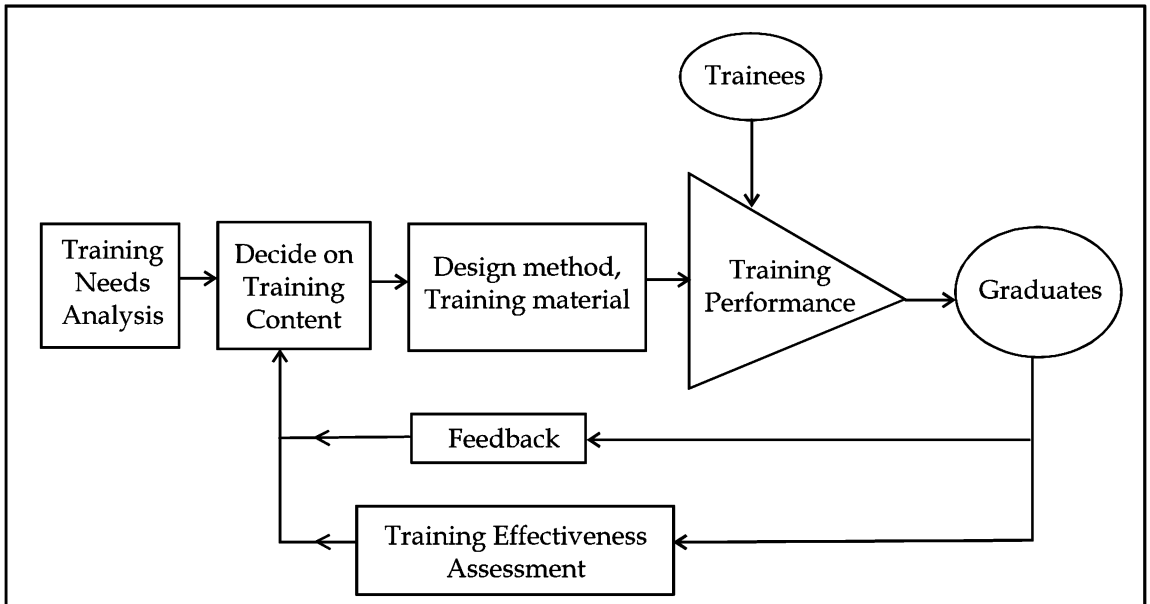

Fig : System Approach to Training Based on Prem Prakash (2004)

The role of occupational psychologists is to examine the needs of the employee, of the organization, and of the task, decide upon the most appropriate training programmes, drawing from the rich psychological knowledge, and taking feedback from the employee. In this context, the system approach to designing a training programme can be studied :

Training Needs Analysis

Conducting training on ad hoc basis or purely for short-term goals is myopic; it needs to be well organized and planned. Hence, the occupational psychologist makes a training needs analysis, consisting :

- Organizational analysis
- Task analysis
- Person analysis

There are certain superordinate goals of the organization, irrespective of the goals of various tasks and departments. First, the training designer needs to examine the organizational goals (present) and its vision (future) and decide upon the best way to achieve the goals and visions. For example, if an organization plans to computerize all its processes, then what are the needs of the organization ? What kind of skill sets in its employees will help the organization in meeting its goal ? Evidently, the employees have to be made computer-literate.

Then, the training designer needs to prepare a **task analysis**. Task analysis is a study of skills, materials, knowledge and tools etc. that employees would need to do the task efficiently. In task analysis, the overview of what the training program is going to consist of is built. **Person analysis**, on the other hand, refers to matching of skills of individual employees to the needs of the job. If at anytime, it is found that her skills are deficient in optimally performing the work, further training is suggested.

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Psychological factors in Training

Before we proceed to study various training programs designed by psychologists in industries, it is necessary to understand certain basic psychological principles underlying training.

Actual Practice : For learning to be most effective, trainees must be actively involved in the learning process rather than just passively receive information. For instance, if I watch a video of someone operating a truck, I can't put it into practice by driving a truck. The training program needs to provide the trainee with ample opportunities to learn herself. Class lectures, videos and manuals would definitely make you a better learner but you can't learn as long as you haven't experienced the job first-hand.

Massed and Distributed Practice : Certain tasks are learnt more readily when the trainee is trained on a few relatively long practice sessions (massed learning). Other tasks require a larger number of relatively short practice sessions for better learning (distributed learning). Most studies have shown that in general, distributed learning results in better learning. In a meta-analysis of 63 studies, it was found that for jobs demanding relatively simple tasks, distributed practice with short rest period is more effective. But for more complex tasks, longer rest periods was more effective. In both cases, distributed practice was more effective (Donoran and Radaserich, 1999).

Whole and Part learning : Should a task be learnt by breaking it into parts or should it be learnt as a whole ? Research work has concluded that not one of these is the best strategy in all conditions. It is seen that when the task is of high organization, whole task learning is more efficient. But when the task involves low organization, part training method is more efficient. Most work psychologists try to combine both these methods to reach at an optimal learning strategy.

Transfer of Training : This refers to the extent that the skills learnt during training are transferred to the actual job. The transfer of training can be both positive or negative. In positive transfer, the training helps in improving the performance of the employee at work. On the other hand, negative transfer happens when the skills one learns interfere with her work.

There are many factors on which transfer of training depends. Some of these are :

a) If there is a close correspondence between the behaviours and attitudes taught in training and the behaviours and attitudes at work, then positive transfer happens.

b) If there is little similarity between training environment and work environment, then negative transfer takes place.

c) Negative transfer occurs when older skills conflict with newer skills. If the older skills are conflictual, interference between pro-active memory and retroactive memory takes place. Hence, some strategies to unlearn old skills must be employed before new skills are imparted.

d) Older workers, particularly those over 50 years of age find it difficult to transfer training. **Borteous** (1997) opines that older workers have problems adopting to new technology.

Above factors should be kept in mind when designing training. Now-a-days, computer simulation and virtual reality are popular for training. Here, the psychologist tries to simulate real work conditions and behaviours in virtual

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world. In one study, 58 aviation cadets of Israel's air force were required to begin flight training. Some of these were first trained for 10 hours in a computer game that simulated the kind of activities a pilot would perform in the cockpit of an actual fighter plane. It turned out that those who got the simulation training performed better than those who didn't when the real flight training started (Gopher, Well and Barakot, 1994).

Feedback : Feedback, or the "knowledge of results" indicates to the trainees their level of progress. Feedback helps the trainee in correcting and changing any inappropriate behaviour that she has learnt during the training otherwise, she would keep practicing the inappropriate behaviour. Also, feedback helps maintain the motivation to perform.

Training Methods

On-the job training :

This training takes places on the job where the trainee is supposed to be posted later. It happens under the supervision of an experienced operator who has been operating the machine. Some advantages of this training method are :

1. It is cheap. No separate training facility or training staff are needed.
2. The transfer of training is positive. The job performance in training situation will carry over to actual work situation because both are the same situation !
3. The motivation to learn is high because the training situation is relevant to the trainee.
4. Feedback is immediate and visible as good performance shows.

However, there are certain concerns regarding on-the-job training, like :

1. Workers and supervisors have to take time out of their regular work to train trainees. This can be expensive in the long run by affecting productivity.
2. On certain jobs, giving an untrained employee access to hazardous machinery may pose a safety risk not only to the trainee but also to other employees.
3. Usually, the trainers are current workers. They may be experts in their job, but not necessarily good trainers. Performing a job and teaching the job to another are different tasks.

Vestibule Training :

As seen, on-the-job training isn't always advantageous and may sometimes hamper normal functioning of other employees. Hence, a simulated workspace can be established at a separate training facility. This is called vestibule training. Vestibule training makes use of equipments similar to those existing in actual workplace but relies on skilled instructors to train new workers. Here, trainees are under no pressure to perform; they have the scope to make errors and learn from errors. Yet, vestibule training has certain disadvantages :

1. It is costly to maintain a separate facility with dedicated teaching staff.
2. There are chances of negative transfer of training. Often, obsolete equipments that are retired from the production floor are used in vestibule training. This may lead to negative transfer of training.

Computer Aided Instruction (CAI)

CAI is based on Skinner's concept of **programmed learning.** The software acts as the instructor and provides the trainee with a task that depends on her performance in the previous task. CAI has many advantages over traditional training methods :

1. Trainees are actively involved in the learning process.

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2. Trainees can work through the software at their own pace.
3. The feedback is immediate.
4. It is just like a private tutor; since the CAI software provides individualized instruction.
5. CAI can be used with any number of employees at any time, without any concern for trainers' availability.

Net-based training

Net-based training is a form of distance education where training courses are available at a central server on the net. It has all the advantages of CAI; at the same time it is 20% to 35% lower in cost to traditional classroom instruction (Schultz and Schultz, 2002).

Behaviour Modification :

Positive reinforcement can be used in many situations in the workplace to change behaviour. Usually, the work psychologist makes an assessment called *performance audit* to determine the behaviours that can be modified for more efficient job performance. Then the employee is rewarded for displaying the desired behaviours. Punishment isn't used to modify behaviour because it only tells what behaviour not to follow. It doesn't speak of the appropriate behaviours to follow.

Business Games

Business games try to simulate a complex organizational situation. The aim of business games is to develop problem solving and decision making skills in managers. Usually, the trainees are divided into two teams. Both teams are given some hypothetical situation and certain problems and they have to compete in better solving the problem. Business games have been found to help management trainees gain experience in decision making, team play, role taking (one members is made the leader of a team. As the leader, she is the boss), and techniques to better handle stress. I recommend to you a tele-series called "The Apprentice" to have a peep into how business games are played. This series is hosted by the millionaire Donald Trump.

Role Playing

In this training, management trainees are asked to act out a particular role, 'displaying whatever behaviours they believe are appropriate in a given situation, they act out these situations in front of a group of trainees and instructors, who offer comments on their performance'. (Schultz and Schultz, 2002). Role playing 'enables trainees to understand the views of subordinates and acquaints them with the role they will be expected to play as managers. It provides practical experience as well as feedback from other trainees and instructor'. (Ibid, P. 177).

Diversity Training

Ethnic and caste prejudice and sexual discrimination that are prevalent in society often get reflected in interpersonal relations in the organization. Diversity management, to reduce ethnic prejudices and sexual discrimination, is a prerogative of an organization. Hence, the need for diversity training. The aim of diversity training is to make the employee take up the perspective of a minority community individual or of a woman; how they must be feeling on being discriminated against. This is done through lectures, videos, role playing, sensitivity training and confrontational exercises etc.

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Career Development and Planning

Today, organizations recognize that it is their responsibility to provide employees with opportunities for personal growth and development. Basically, there are three distinct career stages in the life (between 20 years to 60 years) of an employee :

1. Establishment stage
2. Maintenance stage
3. Decline stage

These stages have been dealt in detail in the section on career counselling in the chapter on Educational Psychology. The growth needs of an employee in all these stages are different and need to be met by the organization for proper HRD. For example, the **establishment stage** employee is concerned about learning more and varied skills. Hence, she must get opportunities to train, to attend university workshops and to go on study leave for higher studies. The employee in **maintenance stage** needs to fulfill her self-actualization needs and the company should give her greater job control to do so. In the **decline stage,** the employee can provide counselling service to the employee to cope with various stressors; put in place a good **exit policy** so that retirement process becomes hasslefree.

Sensitivity Training

Whenever we talk about training, the first thing that comes to mind is an exercise to improve professional skills to work on some machine. One needs technical skills to work in a factory; computer software skills (proficiency in software languages, debugging, trouble shooting etc) to work for a software company etc. But as one moves higher up the organizational ladder and takes up managerial posts, there is another skill that becomes more important than software skills : it is the human software skills. Here I am referring to good interpersonal skills.

Interpersonal skills become necessary for a manager as he/she has to take on the perspective of others and has to relate with others in a more meaningful way. Hence, the need for training to improve skills in group setting. **Sensitivity training** is one such attempt to provide human software skills. It helps a participant to understand why others do whatever they do.

Sensitivity training is an outgrowth of research efforts of **Kurt Lewin** and his colleagues. They were concerned about the dangers of autocratic leadership hence tried to identify the skills needed by a leader to be 'sensitive' to group needs.

Sensitivity training is a process-oriented programme and focusses on certain goals, like:

1. Making participants more aware of the emotion of themselves and others in the group; and increase their sensitivity towards others' emotions.
2. The ultimate aim of the training is to have intense experiences leading to life changing insights.
3. In sensitivity training, participants also attempt to perceive and learn from the consequences of their actions.

The base philosophy of sensitivity training has been ably articulated by **Kurt Back** : "Sensitivity training started with the discovery that intense, emotional interaction with strangers was possible. It was looked at, in its early days, as a mechanism to help reintegrate the individual man into the whole society through group development. It was caught up in the basic

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conflict of America at mid-century : the question of extreme freedom, release of human potential or rigid organization in the techniques developed for large combines". Today, sensitivity training is generally accepted as an effective means to reduce racial discrimination and sexual harrassment in the workplace; so also to reduce conflict among managers.

Sensitivity Training Procedure

Sensitivity training consists of 8-10 people. Most of the participants are managers from different organizations. They don't know each other; nor are they formally introduced to each other when they are brought together. There is no agenda and no leader to tell them what to do. The trainer sits with them without revealing her identity. She pretends to be one of them, from some organization.

In the beginning, there is no formal agenda. The *'ice-breaking'* phase starts when people start speaking to each other and try to get to know each other.

The trainer, who is sitting among them, intentionally brings in some topic of a controversial nature for discussion. For instance, topics like : reservation for scheduled castes in private sector, sexual harassment, recruitment of muslims and discrimination faced by them etc. A debate starts which turns into a heated argument leading to accusations and misunderstanding. Some participants become uncomfortable and want to leave. This phase is known as **'emotional storming' session.**

At this point, the trainer becomes open and expresses her feelings in a minimally evaluative way. This serves to provide feedback to participants. In the next phase, interpersonal relationship develop and members are able to understand the other participants' point of view and accept it. Finally, the participants together explore the relevance of the experience in terms of situations and problems in the organization.

Evaluation

Sensitivity training is quite popular in organizational and school setting. However, there are quite a few debates on the utility of sensitivity training. Roy, for instance, has questioned the utility of T-group programs because these programs are based on western research and reality. Will they fit into the organizational reality in India ?

Some researchers are concerned by reports that individuals who have participated in T-groups have serious emotional breakdown and need psychiatric case. Some others have pointed out that sensitivity groups invade the privacy of an individual; hence are not rightfully within the domain of organizations.

Variations of Sensitivity Training

There are several variations of sensitivity training. Some of the important ones are **T-group training** and transactional analysis (T.A.). The goal of T-group is to give the trainee an understanding of why she acts towards other people the way she does and why other people act the way they do. This fosters an understanding of others and helps managers to better manage relationships. Further, there are three types of T-group : **stranger groups** (participants are strangers and have come to the training from different organizations), **family groups** (participants belong to the same department and know each other quite well) and **cousin groups** (where participants belong to different departments of the same organization).

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Transactional analysis is a theory of personality and also a form of psychopathology developed by Canadian psychoanalyst Eric Berne. A form of sensitivity training is based on transactional analysis (T.A.). The basic philosophy is that three ego states coexist within the same personality :

1. The child
2. The adult
3. The parent

T.A. through sensitivity training seeks to improve interpersonal relations by adjusting the balance between these ego stages.

Encounter Groups

Many psychologists consider encounter groups as a type of sensitivity-training groups. Yet many others do not because of difference in rationale, goals and methods. In general, encounter groups put a greater emphasis on individual growth than on group interaction. Encounter group training aims at helping participants gain insight into particular social and personal problems and learn to cope with them mere effectively.

The flexibility of encounter groups is more than that of T-groups. Hence, many formats of encounter groups have evolved. One format deserving special mention here is the marathon format. In the marathon format, members meet one weekend and keep discussing without even breaking for sleep. The logic behind using the marathon format is that the "opening up" process (i.e., the expression and exploration of personally meaningful feelings) is hastened by such intense contact. Also, inhibitions are lowered due to fatigue. Finally, since now they are separated from the outside environment for a long period of time, the influence of group experience is maximum.

The marathon encounter group has been called a "pressure cooker" because of the emotional tensions that gets built up. Also, like a pressure cooker it is capable of compressing the amount of time required for the training to be effective (Coleman, 1969).

Learning in Sensitivity Groups

Till now, we have only been running around the bush, discussing what the objectives of sensitivity training are; what is the procedure used in various formats etc. But how does learning happen in sensitivity training ? To understand this, we move to the source inspiration Kurt Lewin. Lewin had stated that any kind of change in the learner moves through three stages :

Unfreezing → Moving → Freezing

For the desired new learning to occur, we need to unfreeze the individual. This can be done by generating certain amount of tension or anxiety. Anxiety is aroused due to the nature of face-to-face encounter where one's personal feelings get expressed. Also, defence mechanisms get weakened and this created anxiety. Anxiety is good because it helps the individual get loose from her preconceived notions and habitual ways of reacting. This unfreezing helps because only then one can 'move' (i.e., learn new attitudes and feelings). The second stage (moving) occurs because in all forms of sensitivity training the individual, is given feedback about her behaviour by other members of the group. At the end of this process, the new learning is freezed and the individual carries over the skills in human relation management outside the training.

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n Psychological tests in the industry

Psychological tests are used in organizations in every stage of manpower planning. Psychologist tests are expectations of employees, their perceptions, attitudes and value orientation. These tests can be studied in terms of various industrial functions, as :

1. Recruitment tests
2. Performance Appraisal
3. Integrity tests
4. Tests to assess employee attitudes and motivation.

Recruitment Test :

As already mentioned, recruitment is based on knowledge, skills and attitudes of the candidate. To measure these, certain instruments used are :

1. **Biodata :** The concept behind study of biodata is to list the environmental factors commonly found in successful and unsuccessful candidates. Based on these, weighted application forms are constructed. These forms are filled by candidates and submitted to the HR of the company; based on the application blanks (candidate's background – academic, extra-curricular etc.) initial screening is done. This assessment can be discriminative at times. For example, a HR manager with casteist attitude may unconsciously screen out the biodata of a candidate from lower caste background. In another situation, suppose no woman has ever worked in the shop floor of a manufacturing firm. That doesn't mean women mustn't be considered for the job.
2. **Interview :** Interview is an approach to know the candidate first-hand. Interview may take a structured or unstructured form. Unstructured interviews are similar to an informal chat. There is no fixed procedure or aim of the interview. Rather, the candidate is selected by a hit-and-miss approach. The reliability and validity of such interviews are questionable. Herriot (1989) is of the view that unstructured interviews are prone to sex bias as the interviewers are often male and are more likely to engage in comfortable chat with male candidates. Hence, many employers prefer a structured interview where set of questions are asked to all candidates in a particular order. It is a sort of verbal psychometric test with quite satisfactory validity.
3. **Work Sample tests** are used to measure knowledge and skills. Knowledge can be measured by a simple quiz test. Skills can be measured by asking the candidate to provide a work sample. For example, a web designer may be asked to design a website; a software programmer may be asked to write a program. These are relatively easy to measure and have good face and predictive validity.

   Some aptitude tests are used on freshers, since they are fresh from college and don't have any industrial skill. Aptitude tests try to predict the candidate's aptitude for some specific job. The skills could be developed later by training.
4. **Psychometric testing and assessment :**

   Intelligence tests are used to assess an individual's underlying ability to solve problems and adapt effectively to their environment. There are two major types of intelligence tests :

   - Group tests Ex. Block test
   - One-to-One test Ex. WAIS.

   In employee selection, usually group tests

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are preferred because they are cheap and easy to administer viz-a-viz, one-to-one testing. However, group tests have low predictive validity. These tests are also **culture specific** i.e. a test specifically designed to test individuals of mainstream cultures isn't sensitive to minority sub-cultures. Also, there is the risk of *test sophistication* (the more tests of a particular kind that an individual does, the faster her performance becomes. Many coaching institutes, for example, help students practice for intelligence tests).

Attitude of the candidate is important. In any job, the social skills of an individual affects his and his work group's performance. Some ways to test attitude are :

1. Reference 2. Group discussion
3. Projective tests.

Employers already ask for references but references can be misleading at times. Group discussion displays an individual's interpersonal skills, so also her emotional intelligence. However, many participants of a group discussion can't participate because of their communication problems or because of other candidates' dominance over the discussion.

Projective tests, such as the Thematic Apperception Test (TAT) are another way to assess attitude. TAT consists of 30 pictures and drawing of two or more individuals in a range of ambiguous social setting. The person being tested is asked to make a story on the pictures. In the story, she projects her attitude. Projective tests are highly subjective and rely heavily on the skills of the tester. This subjectivity leads to problems of reliability. Work psychologists need to be sufficiently trained to use these tests.

Personality tests are used by the employer to get a picture of the candidate's basic traits so that these can be matched against the demand of the job. Two popular personality tests used in recruitment are **Eysenck Personality Inventory** and **Cattell's 16-factor test.** Eysenck's personality inventory, for example, throws light on whether a candidate is emotionally stable or neurotic. Also, whether a candidate is introvert or extrovert. **Extroverts** are sociable, outgoing, impulsive, like taking risks and it is difficult to condition them. **Introvert** are quiet, cautious, have a high level of anxiety and are easy to condition. This helps the employer assess whether the candidate is good for the job or not.

There are many criticisms about personality tests, and psychometric tests in general. Eysenck (1998) stated that intelligence tests have 'generated more heat than light' meaning that such tests create more controversy than provide information.

It is often argued that psychometric tests lack validity and reliability because it is easy to cheat. Intelligent candidates can give answers that they feel are appropriate, rather than telling the truth. However, if a test is well-designed and includes a lie scale (i.e. including statements that can't just be true to check test-taker's honesty), many contend that this kind of cheating can be avoided. For example, 'I have never been late in life' is so unprobable that it is a lie.

Personality tests have the underlying assumption that personality characteristics are stable. However, certain studies have shown the influence of situational factors. For example, Jessup and Jessup (1971) correlated scores on Eysenck's personality inventory and pilot training in Royal Air Force (RAF) in UK. It was found that pilots with low extraversion score initially showed **high extraversion** after successful completion of training.

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Performance Appraisal

Most organizations carry out formal evaluations of employees' job performance, called performance appraisal. This appraisal is used to :

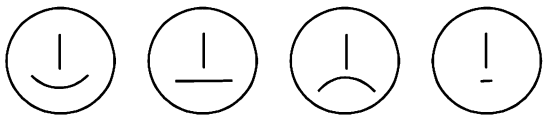
- Distribute performance-based bonus
- Decide on promotions
- Decide on termination of employment.

For instance, **Mckinsey** grades every employee on a scale of 5. The employee who scores 2 or less in three consecutive years is asked to leave the company. There are broadly two types of performance appraisal : **Ranking tests and Rating tests.**

Ranking tests are used to rank employees according to their performance relative to other employees in the division. Problem with this test taking method is that an employee who performs satisfactorily may be ranked as "poor" in relation to others. Many scholars and management consultants are of the opinion that this testing pattern has potential to lower employee morale.

Rating tests are preferred over ranking tests as here managers are asked to rate the employee on a scale rather than relative to others. The most popular method to rate employee performance uses graphic rating scale. A sample of this scale is :

Q. Which face reminds you of the employee ?



(A) (B) (C) (D)

Two other tests are Behaviourally Anchored Rating Scale (BARS) and the Behavioural Checklist.

In BARS, 'the rater chooses the voting category by choosing the behaviour that is most representative of the employee's performance on that dimension. Research on the BARS method suggests that these scales provide more accurate ratings of employee behaviour than to traditionally anchored rating scales.' (McIntire and Miller, 1999, P. 541).

As in every psychological test, rating tests also are liable to errors. Leniency error occurs when the rater rates every employee liberally. Severity error occurs when all employees are rated below what they deserve. Central tendency error occurs when the rater tends to give average rating to all employees. A halo effect is one in which the rater's judgement on one dimension (which is usually very high) tends to make the rater judge the employee similarly on other dimensions. These errors occur because raters have to make subjective decisions while quantifying job performance of the employee.

With increasing job transparency, 360° feedback is being used in rating employees. Here, the employee is rated by her boss, peers, subordinates and customers as well as by herself. This reduces the risk of rating errors.

Integrity Tests

With economic pressure to become more efficient, employers today have become more concerned about issues of employee theft. In recent times, many thefts have come to light in the BPO industry in India. Fitzgerald (2003) notes from a study in Canada, that employee theft is responsible for 33% of theft from retail stores. He contends that integrity of employees must be tested during recruitment and after major thefts. Assessment for integrity tests can be by **physiological measures or pencil-and-paper tests.**

The polygraph, or the lie detector test, is the most popular physiological measure. The

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machine generates a number of graphs of skin resistance, heart rate and respiration. It is assumed that if the person taking the test lies, it leads to different responses. Paper and pencil tests are based on projective methods. It must be reiterated that both tests have low reliability in detecting lies. Polygraph users may make the **"othello error"** i.e. take signs of distress (which are manifested as emotional arousal in the polygraph) as proof of dishonesty. A meta-analysis of integrity tests in 1993 by Ones, Viswesvaran and Schmidt has yielded encouraging results.

Tests to Assess Employee Attitude and Motivation

An employer needs to know employee attitude and perception on a range of issues from time to time. For example, if a steel company wants to go for a major restructuring, it must first assess workers' attitudes, lest they decide to oppose it under trade unions.

Likert's attitude scale and social distance scale can be used to assess employee attitude. **Fitzgerald** believes that psychological tests can shed light on prevalence of sexual harassment and gender discrimination in the workplace. This kind of assessment is, in fact, part of employer's moral duty to manage diversity.

Motivating employees is an important role of HR. To motivate employees to work towards organizational goals, the HR must be aware of employer attitudes and beliefs, their expectations from the organization etc. For example, if employees are motivated more by perks and services like hospital facility, education for children etc, it will be fruitless to give them more money. Psychologists have devised tests to measure work motivation. For instance, Kanungo has developed a popular test to measure job satisfaction and job involvement.

n Theories of Work Motivation

Behind every goal-directed behaviour, there is motivation. More the motivation to achieve certain goals, more the chances are that the individual will show purposive behaviour. More the purposive behaviour of employees to strive for task goals and organizational vision, better the efficiency and output of the organization. Employers don't miss this simple and direct link between organizational effectiveness and employee motivation.

The challenge here is to determine what constitutes motivation ? How to motivate employees towards organizational goals ? Traditionally, it was believed that employee behaviour should be controlled by rewards and punishments. This view was a **behaviourist view** and has since been contested by many content theories (Maslow's hierarchy of needs and Herzberg's two factor theory) and process theories (like Vroom's expectancy model). We will start the discussion of this section with Maslow's hierarchy of needs which is a humanistic approach as opposed to the behaviouristic approach predominant at the time.

Maslow's Hierarchy of Needs

Maslow's hierarchy of needs wasn't specifically designed for work motivation. Rather, it was a general theory that became immensely popular in managerial circles. This theory states that a hierarchy of needs exists. The fulfilment of needs of one stage (lower) in the hierarchy only leads to a concern for the needs of the next stage (higher). Unless the needs of a stage are fulfilled, the employee

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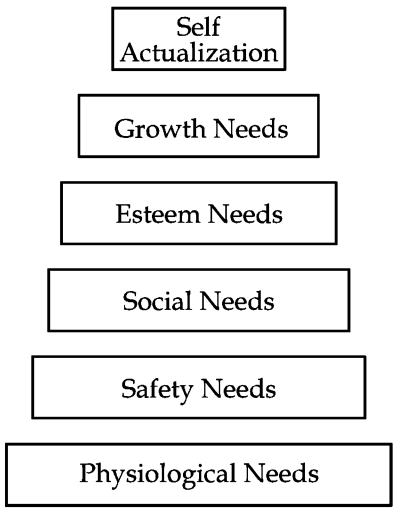
doesn't strive for the needs of the next stage.



- **Physiological needs, safety needs and social needs**

At the base of the pyramid, lie the physiological needs of hunger, thirst and sex. Non-fulfilment of these needs lead to physiological deprivation and an intense motivation to fulfil these needs. However, once these needs are met, it ceases to be a motivation. If it is not met, the individual ignores other needs but when it is met, the individual's needs move on to the next stage : safety needs.

Safety needs refer to the need to ensure that one is safe from physical and psychological threats. An environment which is predictable and where the individual perceives some degree of control fulfils this need. It must be noted here that the point at which one becomes content with safety is quite subjective. An adolescent staying in a slum, for instance, has very low safety needs. On the other hand, an old woman living alone has more safety needs.

Once physiological and safety needs are met, **social needs** of the individual become important. Need for affiliation and need to be rooted in a social group are important motivators. It can be pointed here that Elton Mayo had observed that there are informal social groups in organizations. He found many employees following social group norms rather than managerial incentive. This may be because when earlier needs are fulfilled, social needs become stronger.

These three needs, lower down in the pyramid are **deficiency needs**. Next, Maslow discussed certain needs that were path-breaking in HR Management of the time.

- **Esteem Needs, Growth Needs and Self-Actualization Needs**

Esteem needs refer to the desire for personal achievement and recognition for work done. This is associated with the need for self-respect and status. Esteem needs are not affected by the pay (unless pay is a symbol of status), rather by the degree of autonomy and responsibility that is provided to the employee.

Next come the **growth needs** which need not be essential but provide opportunities for personal growth and self-actualization. Growth needs include **cognitive needs** (the need to know; the curiosity to express the environment) and **aesthetic needs** (the need to appreciate beauty and art). The implication of these needs is that **creative expression** can be intrinsically satisfying. Those who are unable to meet these needs at work try to fulfil these needs in leisure time. The lesson for management here is that by facilitating the fulfilment of growth needs, it can harness the creativity of employees.

Self-actualization needs, the most

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controversial of Maslow's needs, is at the top of the pyramid. Humanistic theorists believe that given the chance, human being is intrinsically motivated to realize her full potential i.e. to actualize her self. Maslow argues that not everyone is fortunate enough to strive for self-actualization. Only those whose earlier needs are met seem to strive for actualization.

Maslow's Theory : An Appraisal

Maslow hierarchy had become very popular in business circles ever since Maslow proposed it. However, Maslow didn't back up his theory with any research. Other research into his hierarchy have shown some lacunae in the theory. Some concerns are :

- The claim that without fulfilment of lower needs, the individual doesn't strive for needs place higher up in the hierarchy has been proved wrong in many cases. For instance, people have been found to compose poetry in concentration camps !
- The hierarchy projects needs as if they are objective. How much of physiological needs are enough ? How much safety would satisfy the individual so as to enable him to move up ? It is quite subjective and depends on the perception of the individual. The individual's cognitive processes have been ignored in drawing this theory.
- Though immensely popular, its application value is extremely low. How does one measure self-actualization ? Rather, how do we detect self-actualization ? It is too subjective concept to be used in practice.
- Finally, Maslow's hierarchy of needs is **culture-biased.** It represents the need hierarchy as it exists in individualistic, western cultures. For instance, in collectivistic traditions of the East, social needs are preferably met before safety need. Also, the concept of actualization is different in different cultures. In India, the satisfied man strives for spiritual unity of Atman (self) with Brahman (universe). This is actualization in Indian context.

Herzberg's Two-factor theory

Herzberg had conducted a study on work motivation of 200 accountants and engineers employed in firms in Pennsylvania, USA in 1950. From his study, he found that the factors involved in producing job satisfaction are different from the factors that produce job dissatisfaction,

Maslow made the distinction between higher and lower order needs, that is, growth needs and deficiency needs. Herzberg opines that these needs are not two ends of a continuum. Rather, factors which **remove dissatisfaction** are called **hygiene needs;** they don't provide motivation. Hence, he talks about two issues :

1. Satisfaction vs. non-satisfaction
2. Dissatisfaction vs. non-dissatisfaction

Please also note that Herzberg's hygiene needs (i.e. factors affecting job context) are related to extrinsic motivators (pay, job security, working conditions, company policies etc) whereas motivator needs are related to intrinsic motivators (curiosity, need for status, need for self-fulfilment etc.)

Herzberg's theory has deep implications for management. It states that factors like salary don't motivate employees. Salary is necessary but not sufficient condition for motivated behaviour. Hence, the need for **job enrichment/**

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Secondly, all dissatisfiers need to be removed. Just paying salary won't work. The concept of worker welfare is important here because without basic hygiene factors, the employee stays dissatisfied.

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An Appraisal

Herzberg's theory was based on interviews with a sample of 200 male engineers and accountants of firms of Pennsylvania. It is dangerous to generalize the theory to other situations. This theory has been challenged by many scholars, one prominent among being Victor Vroom. Vroom (1984) claimed that the two-factor theory was only one of the conclusion that could have been reached from the study conducted by Herzberg. It is also possible that Herzberg made the fundamental attribution error when conducting his study i.e. in his method, Herzberg probably attributed good results to his theory and bad results (that were contradictory to his hypothesis) to situational factors !

Landy (1985) suggests that in the two factor theory, Herzberg defines satisfaction and dissatisfaction the way people think about it in western countries. If that is so, it doesn't have cross-cultural validity. Satisfaction depends on people's perception, which in turn depends on the culture one belongs to Swalapurkar has found that for Indian middle class, factors like salary and job security act as motivators.

Katz (1978) has suggested that job satisfaction isn't an objective construct as Herzberg wants us to believe. Rather, it varies throughout work life. Katz interviewed 3,085 employees working in the public sector and private sector in USA. He found a relationship between job satisfaction and length of time in employment and that it changed over time. In deed, what individuals want out of a job can vary with age, sex, social group and individual expectations.

In spite of these criticisms, it can not be denied that Herzberg contributed substantially to understanding work motivation. He extended Maslow's need-hierarchy and made it more applicable to organizational settings. Also, his concept of job content factors helped managers to go for job enrichment.

Vroom's Expectancy Theory

Expectancy theory marks a departure from the content theories of work motivation. Expectancy theories are cognitive theories in the sense that they focus on the employee's need perception. Secondly, these theories are process-oriented. Two dominant expectancy theories to be discussed here are **Vroom's theory and Porter and Lawler's** development on Vroom's theory.

Vroom was inspired by the cognitive theories of Lewin and Tolman; and so believed that human behaviour is the result of active interaction between individual characteristics (personality traits, needs, attitudes and values) and perceived environment (such as job requirement, role clarity, supervisor's style and work culture). To use Lewin's famous formula,

$B = f(P, E)$ where B = Work Behaviour
P = Employee Characteristics
E = Work situational factors

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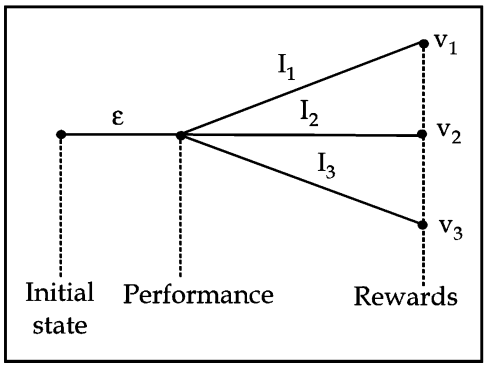
Vroom, in 1964, forwarded his theory in which he reasoned that motivation is the result of three different kinds of cognitions :

1. **Expectancy :** The belief that one's effort will result in performance.
2. **Instrumentality :** The belief that the performance will be rewarded.
3. **Value :** The perceived value of the rewards to the employee.

This theory can be explained with the help of an example. Suppose Hari is a worker in a power plant. Before doing a task, he thinks whether his efforts will lead to performance. If he doesn't have the skills to perform the role or the organization doesn't give him sufficient autonomy, his expectancy (ε) is low.



But if his expectancy (ε) is high, he now reasons : why should I perform ? With I get rewarded ? How instrumental is my performance in getting rewards ? Suppose for the kind of performance, the company policy states that Hari will get bonus (reward 1), health insurance (reward 2) and greater work responsibility (reward 3). The instrumentality for each outcome varies from +1 to -1. +1 means that the performance is necessary and sufficient condition for the reward. For example, Hari won't get bonus without performing. Negative instrumentality means that the performance may infact hamper the attainment of reward. Suppose a worker wants healthy benefits (reward) but will lose it if he gets transferred to another department, the instrumentality is negative.

Also important here is the value that Hari attaches to the rewards. If Hari doesn't value health insurance or already has one, his value (v_2) is low for reward 2. If he fears that his better performance will increase his work load, the value v_3 (corresponding to reward 3 i.e. greater responsibility) may be negative. Many workers in a steel company I worked in feared that if they did something in front of the manager, they may be called again to do the work !

Hence, Hari's perception that performance (P) will be rewarded (R) is :

$$[P \rightarrow R] = \sum_{k=1}^{3} I_k V_k$$

Hari's belief that an effort will lead to the said performance is E_j. There may be many efforts and many different performances. Hence, this particular performance is called E_j. Hence, Hari's expectancy here is :

$$\text{Expectancy} = E_j \times \sum_{k=1}^{3} I_k V_k$$

His total expectancy from different work challenged is :

$$\text{Expectancy total} = E_j \times (\sum_{k} I_k V_k)$$

Vroom's expectancy theory has important implications for the industry. Some major implications are :

1. Motivation is not directly linked to job performance. The causal link isn't direct. Rather, there are personality factors, skills, abilities and values that affect job performance.

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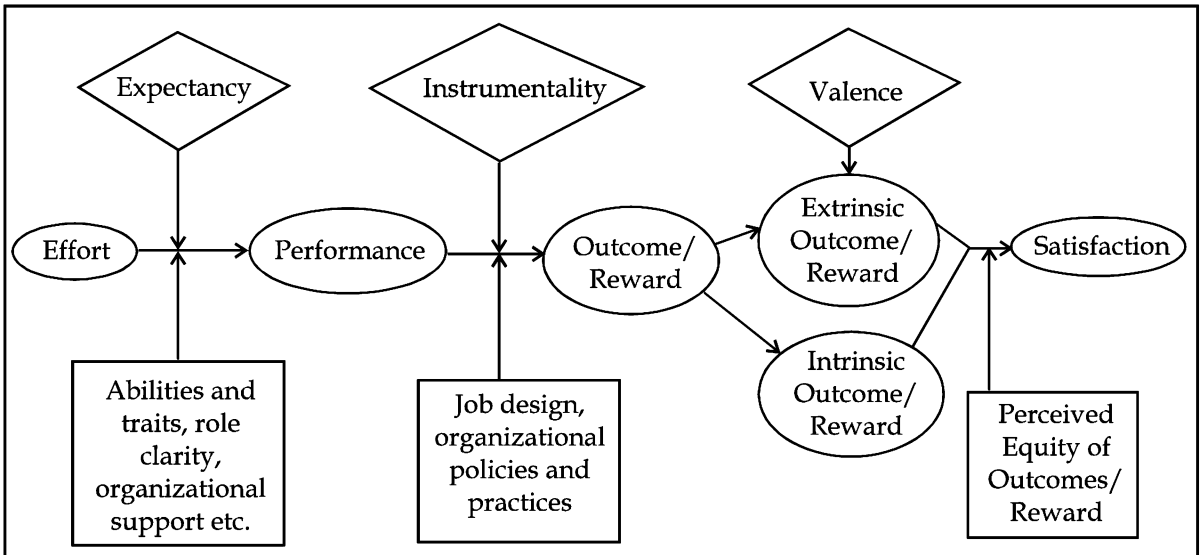

Fig. : Porter and Lawler's expanded expectancy model
Adopted from Porter & Lawler (1968)

2. The individual needs to be given ample opportunities to carry out the job. She won't put an effort if she lacks ability or if there is no organizational support. Clarity of role also affects the expectancy that an effort will lead to a performance.
3. It is not the instrumentality of the outcome in getting rewards but the perceived instrumentality that matters. Hence, the company policy needs to be clear and there ought to be transparency in performance appraisal.
4. Before rewarding an employee, the HR must ascertain what value the employee attaches to the reward. The value that one attaches to a reward is based on her personality traits, attitudes and cognitions. Hence, the HR must conduct attitude tests to assess employees' reward preferences before rewarding them.

Porter and Lawler Theory

Porter and Lawler (1968) have expanded and reinterpreted the expectancy theory of Vroom. This model is represented in the diagram below :

Porter and Lawler have made some important additions to expectancy theory, as seen in the diagram. Some of these are :

- The fact that *performance* depends on abilities, traits, role perceptions and organizational support have been made explicit. *Role perceptions* refers to the clarity of job description and the extent to which employees know how to direct their efforts towards effective performance. Many-a-times, due to ambiguous role descriptions many employees don't realize where their efforts would lead to best performance.
- This model argues that performance leads to both *extrinsic* and *intrinsic outcomes*. While extrinsic rewards depend on other factors

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like valence (i.e. value of the reward to the employee) and equity perception, the relation between performance and intrinsic rewards is direct.

- This theory also tries to incorporate Adam's (1965) equity model. It states that the extent to which extrinsic rewards will lead to satisfaction depends upon the perceived equity of rewards i.e. the extent to which the output to effort ratio of the employee is equal to that of others.

An Appraisal

The cognitive nature of expectancy theory 'does a good job of capturing the essence of energy expenditure ..... A manager can understand and apply the principles embodied in each of the components of the model. Instrumentalitics make sense. The manager can use this principle to lay out clearly for subordinates the relationships among outcomes (e.g. promotions yield salary increases, four unexcused absences result in a suspension of one day). Similarly, the manager can increase reward probabilities by systematically rewarding good performance'. (Landy, 1985, P. 336-337). Vroom's theory has provided many insights into work behaviour, as discussed earlier. However, the expectancy model has some lacunae, like :

- Expectancy theories, of Vroom and of Porter and Lawler, are **normative models.** These models assume that people use rational cognitive processes, carefully calculating expectancy, valence and instrumentalities. Many people aren't this rational and don't measure their outputs and inputs to make perceptions.
- The theory pays little attention to explaining why an individual values or doesn't value a particular reward. These models don't borrow from the concept of need to determine what rewards are valued and why. The theory has concentrated on the process to such an extent that it ignores the content i.e. the needs of employees.

Adam's Equity Theory

Adam's equity theory is based on the **social comparison theory.** Equity theory argues that people tend to compare their contribution to work and benefits with others in the organization. Basically, the employee selects some referants to whom she compares her output to input ratio. The person is motivated by the perceived fairness of benefits received for certain amount of work. The state of equity is reached when :

$$\frac{\text{Person's outcomes}}{\text{Person's inputs}} = \frac{\text{Other's outcomes}}{\text{Other's inputs}}$$

Please note that the outcomes and inputs mentioned above are perceived outcomes and inputs, not objective ones. Inequity happens when either of the two following conditions occur :

$$\frac{\text{Person's Outcomes}}{\text{Input}} > \frac{\text{Other's Outcomes}}{\text{Input}}$$

$$\frac{\text{Person's Outcome}}{\text{Input}} \quad \frac{\text{Other's Outcome}}{\text{Input}}$$

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4. Change the referant, and in the worst case.
5. Leave the organization.

For example, if an individual perceives that her outcome-to-input ratio is more than others, she feels that she receives more reward than she deserves. Hence, to reduce the inequity she may work harder (increase input) or changes her perception ("I deserve the money I get because I am smarter than other employees"). On the other hand, if her reward-to-input ratio is perceived to be less than others, she may try to improve her output, reduce her input ("Hari gets the same bonus for working only four hours why should I work for six hours ?") or change perceptions ("Hari does smart work. Hence, he is more efficient"). If still unsatisfied, the employee may leave the organization for another.

An Appraisal

Equity theory beautifully combines the notion of cognitive dissonance with social exchange to forward a guideline to managers about doing **distributive justice** to employees. Another implication is that **procedural justice** is also important. It is not equitable distribution of rewards in ratio of inputs that affects employee motivation but the perception of it. Hence, the procedure arrived at when making an appraisal has to be transparent. The subordinates must be aware of the rules you use in calculating rewards for their work.

While the theory makes strong intuitive sense, research on the theory has revealed mixed results. Indian researchers have found that Adam's theory has cross-cultural validity but needs to be suitably modified. Socio-cultural factors determine the extent to which equity principle can explain employee satisfaction.

For instance, Murphy-Berman and his colleagues (1989) found that Indians preferred reward disbursement more on the basis of employee need than on the basis of merit. This is a trend opposite to that of Western countries. It might be because of our collectivistic values of protecting the weak and the needy; or may be because the workers who were studied adhered to socialistic ideology of rewarding to each according to his needs.

LEADERSHIP

Leadership is the ability to influence the activities of a person or a group of persons towards the attainment of certain goal or goals. In the organizational context, it is sometimes used interchangeably with management, though significant differences exist. In the section on power and politics, we have discussed that there are three types of influence processes :

1. Compliance
2. Internalization
3. Identification

Manager is an employee who has been given formal authority of the organization. Hence, he can influence his subordinates by compliance. Whereas a leader influences by internalization and identification also. Hence, a manager may or may not be a leader. For example, when I used to work in a steel plant, I was given the post "Manager, Electrical Maintenance". I had influence on the workers in the sense that if I order, they are bound to do my work. But was I a leader then ? I was new

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to the place, young and had no practical experience. The experienced foremen couldn't internalize the fact that I could handle my job, let alone identify with me. Hence, a manager may or may not be a good leader. Alternatively, an outside consultant who doesn't have any formal authority may become a leader because the employees have internalized the fact that the consultant is an expert in steel processing.

What is leadership ? What is the most effective form of leadership ? We shall now discuss various models proposed to explain leadership and then move on to a typology of various leadership styles.

Models of Leadership

Trait Models

Some of the earliest researchers of leadership believed that leadership is a *disposition* i.e. there are certain personality traits and personal characteristics of leaders. These researchers tried to uncover some traits and abilities that could determine how good a leader one can become. However, their studies haven't been able to give any conclusive results, and they have been largely discredited. Today, it is generally recognized that no one is a born leader.

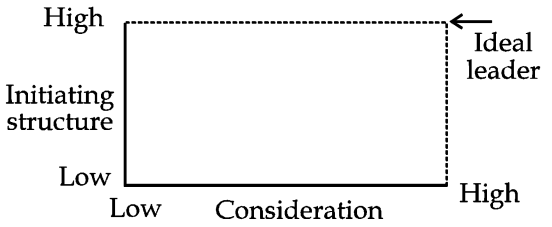
Behavioural Models

When researchers became discouraged by the trait models, they started focusing their attention on what leaders do in their job. The main concern of behavioural models was to identify dimensions of leadership behaviour. One dominant model was forwarded by researchers at Ohio state university. These researchers managed to isolate two major dimensions :

1. Consideration
2. Initiating structure

Consideration (i.e. relationship-oriented) behaviours reflect the extent to which a leader is concerned for subordinates' well-being. A leader high on consideration is friendly and approachable; he has a good rapport and two-way communication with his subordinates. Initiating structure (i.e. task-oriented) behaviours reflect the leader's concern in getting jobs done and making the organizational structure work at optimal efficiency.

The two dimensions are independent of each other i.e. a leader high on consideration can also be high on initiating structure. Any leader's behaviour lies in the following grid :



Even though both trait and behavioural models focus on personal attributes of the leader, they are different. Trait models propose that leadership is a predisposition whereas behavioural models show that leadership can be cultivated.

Situational Models

Both the models discussed above are universalistic approaches i.e. attempts to find leadership-attributes that are valid across situations. Starting from the 1960s, situational models became popular. Also called the **contingency models,** these state that the most

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appropriate style of leadership depends on the situation in which the leader works. As the situation varies, leadership requirements also vary.

The least preferred coworker (LPC) contingency model introduced by Fiedler (1967) argued that when selecting leaders, a person's leadership style should be matched with the situations. There are three situations variables one should consider before matching :

1. Leader-member relationship
2. Task structure i.e. the extent to which procedures have been established for performing the task
3. Position power i.e. control of resources such as money or information.

Hersey and Blanchard (1977) had proposed the now popular **life cycle model** in which they identified four leadership styles – telling, selling, participating and delegating. The model reasoned that 'maturity' of the followers is the key factors on which the appropriate leadership style for the situation will depend. Hence, new employees with low maturity will be best suited for **telling style** (which means high on task-orientation and low on relationship orientation) whereas for most mature employee **delegating style** is the best.

	Task-orientation Low	Task-orientation High	
Low	Delegating style	Telling style	Relationship orientation
High	Selling style	Participatory style	

Another popular model is the **path-goal model** developed by House (1971). It is based on the concept of **self-fulfilling prophecy.** It states that employees will tend to live upto the expectations that leaders have of them. That is why the more effective leaders are those who set up the work environment in such a way that employees can attain goals set by the leader and find the experience satisfying.

The **normative decision model** forwarded by Vroom and Yelton (1973) states that there are three decision making styles :

1. Autocratic
2. Consultative, in which leader takes decisions but consults followers.
3. Group decision is the decision taken by consensus.

There is no right or wrong approach which approach to take depends on :

1. Quality of decision required and
2. Extent to which it is important for other members of group to accept the decision taken.

Of the recent situational models of leadership, I consider the **tri-dimensional leadership theory** relevant here. **Yuki** (2003) who forwarded this theory opines that leadership behaviour can be described in three broad categories :

1. **Task oriented** where the leader is primarily oriented towards efficiency and reliability.
2. **Relations oriented** where the leader is most effective in managing human resources.
3. **Change oriented** where the leader is most effective in innovation and adaptation to the environment.

This theory reasons that effective leaders

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integrate above behaviours in a way that is consistent with the situation.

Leadership styles

There have been many conceptualizations of leadership styles, most of these concentrating on two axes with **autocratic and democratic** styles on extreme ends of first axis and **permissive style and directive style** on other ends of the second axis. These can be represented as under :

	Permissive	Directive
Democrats	Participating decision making Autonomy in task implementation	Participating decision making Leader control over task implementation
Autocrats	Leader makes decision High autonomy to members in task implementation	Leader makes decision Low autonomy to members in task implementation

As seen in the **situational models** discussed earlier, none of the styles mentioned in the two dimensions is the appropriate style. The best style of the above depends on the organizational context and nature of followers. Let us discuss the above four styles, along with few others :

5. Laissez faire style
6. Transformational leadership

1. Directive autocrats :

These leaders take their own decisions. Communication is downward and directive, hence employee has less freedom in task implementation. The leader and follower are psychologically distant. This style is best suited when the followers are unskilled. For example, a contractor can be directive autocrat when dealing with his labourers. Ganguli is of the opinion that Indian workers prefer to be directed and work better with autocratic styled leaders.

2. Permissive Autocrats :

The leader makes decisions but gives considerable autonomy to followers in carrying out tasks. This style of leadership is quite suited for the military; leaders take decisions but cadets have considerable autonomy in execution.

3. Directive Democrats :

The leader consults his followers in taking decisions, however, he takes an active interest in work implementation. This is quite suitable when followers are technically sound and highly skilled. Participatory management is conceptually an offshoot of this style.

4. Permissive Democrats :

Not only decision making is participatory, employees have considerable autonomy. This is the case in organizations with **matrix structure** rather than in bureaucratic organizations. This is most suited when employees are quite mature and self-motivated. An extreme version of this is **Laissez faire.**

• Transformational Leadership

Transformational leaders exert considerable influence over the followers by proposing an inspiring *vision*. They describe in clear, emotion-provoking manner, an image of what the group can become. Not only a vision, they also provide a route for attaining the vision. They have high confidence level, high degree of concern for followers and good communication skills. While "transactional leaders" are those skilled in day-to-day transactions in the workplace,

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transformational leaders help the organization through change. In deed, transformational leaders often come to prominence in times of intense change and lead the organization during transformations.

The reason why transformational leadership is at the centre of focus is that such leaders are visionaries, innovative and can help revitalize any organization in tune with changing time. Take, for example, the case of Steve Jobs. He himself isn't much of an innovator but his motivations of vision has helped Apple Inc to revitalize its position in world market by coming with new cutting-edge products like iMac, iPod and iPhone. Also, Conger and Kanungo (1998) have argued that transformational leadership in essence is proactive, entrepreneurial and change-oriented; hence it is best suited to meet the needs of change in a developing country like India. Hence, the importance of transformational leadership is evident. Let us now discuss some major characteristics of transformational leadership, as noted by Bass (1985) :

1. Vision
2. Charisma
3. Consideration of emotional needs of employees
4. Intellectual stimulation.

1. Vision :

As the name suggests, transformational leaders seek to transform the organization in the face of competition, new technologies and other external challenges. To be able to transform, a leader needs vision. Vision is the ability to be sensitive to changes in organization's environment, the ability to perceive a future advantageous position to which the organization must move to progress. A transformational leader should not only be able to provide a vision, but must also show a path to attain the visionary goals and must be able to articulate the vision to her followers. Hence, she has an ideology that she uses to articulate his vision.

2. Charisma :

Charismatic leadership was first recognized by Max Weber as a concept explaining how certain leaders can influence followers by emotional attachment. Charismatic leaders, by virtue of their personalities and interpersonal skills, are capable of exerting an extraordinary influence on followers without resorting to formal authority. House (1977), who had constructed an ideal-type of charisma, believes that subordinates try to identify with a charismatic leader and internalize her values.

3. Consideration :

The behavioural model discussed in last section talk about two dimensions of behavioural orientations of leaders : consideration and initiating structure. Transformational leaders are high on both dimensions. They are high on consideration because they act as mentors to their followers, give preference to two-way, face-to-face communication and give due regard to training and human resource development. They are high on initiating structure because they are skilled at getting jobs done and in making the organization work at optimal efficiency.

4. Intellectual Stimulation :

Since transformational leaders seek to transform the organization, they are potent enough to show subordinates new ways of looking at old problems; they emphasize on rationality and nurture an organizational climate of intellectual stimulation. For example, Ganesh and Joshi (1985) analyzed scientist

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Vikram Sarabhai's transformational leadership style in institution building. They found that Sarabhai had used multiple strategies like networking, trusting and caring in institution-building at Indian Space Research Organization (ISRO).

Leadership style in India

A major area of interest of organizational psychologists in India is : What is the optimal leadership style suited to Indian situations? From the situational models, we know that the appropriate leadership style varies from situation to situation. Hence, we need to understand both work situation and follower qualities before concluding on the leadership style most suited to Indian conditions.

At this stage, a small literature survey can be done. Pestonjee (1973) reported greater satisfaction among Indian workers under democratic supervision. Many other studies have verified this. Problem is, many other studies have found contradictory trends. Many studies have found that autocratic style is best suited for Indian workers. **Ganguli** for example, has observed that many Indians like to be directed and work best under autocratic leaders. Why this anomaly in research findings ? What conclusion can you draw from these findings?

Prof. J.B.P. Sinha concluded that the contradictory research findings reflect the way leadership styles were defined by various researchers. He argues that Indian researchers saw autocratic and democratic styles as **dichotomies rather than two ends of a continuum.** He has postulated that somewhere on the continuum lies a leadership style most suitable to Indian conditions.

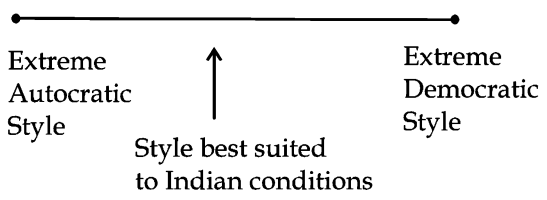

Fig. : Continuum of leadership styles

The Nurturant-task Leadership Style

Based on the Indian situation and nature of workers in India, J.B.P. Sinha has proposed the Nurturant-task leadership style (NTL style). But before getting into defining it, let us learn some salient points about work situation in India :

- Work is not intrinsically valued in India, and there exists a culture of *'aaram'* i.e. rest and relaxation without any scope for hard work. Indians perform work as a favour to others. The logic stated for this is that work is believed to exhaust the individual by draining out her energy which she believes to be precious and limited. Hence, she prefers to expend it only in return for some favour.
- Indians have a high sense of insecurity. Due to this sense of insecurity, they work for accummulation of more money, position and status. Hence, Indians have a high need for power.
- We Indians have lived within the ethos of caste system for a long time. The superior-subordinate kind of relationship of the caste system has had a pervasive effect on our collective unconscious. Hence, we can't be autonomous. We don't have the maturity for self-motivated behaviour. That is why we prefer bureaucratic hierarchies over other forms of organizations.
- Indians are collectivistic and search for personalized relationships.

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Prof. J.B.P. Sinha concluded from above factors that Indian workers have high dependency. Hence, the leader has to be directive and set definite tasks (i.e. be task-oriented). At the same time, Indian workers have high need for personalized relationships. Hence, the leader must be nurturant. A few characteristics of the task-nurturant style proposed by him for Indian conditions are :

1. It is more *task-oriented* than employee-oriented. The leader should maintain strict discipline and should have structured expectations from subordinates.
2. The leader prefers a *two-way communication* to address Indian ethos and cultural values that promote dependancy. The leader should nurture the employees so as to make them feel more secure and less anxious.

Participative Management

The management style in most traditional organizations was directive in nature. These organizations had centralized, bureaucratic decision-making structure, superior-subordinate hierarchy and strict supervision of work. McGregor (1961) observes that this kind of management was followed on the basis of assumptions that the average man dislikes and avoids work and is passive, lazy and indolent in nature. The management believed that employees are solely motivated by **extrinsic rewards** and need to be controlled by management using a **carrot-and-stick policy**. Hence, there was strict supervision of work.

McGregor goes on to argue that work is as satisfying and natural for people as play. However, play is internally controlled by the individual while work in directive managerial firms is externally controlled by the manager. As a result, the work which should come naturally to people becomes unnatural.

Participative Management is based on the philosophy that workers are of various degrees of expertise and maturity. Mature workers are self-directed and creative at work if they are given greater control over their work. Argyris, for instance, has argued that as individuals mature from infant end of personality continuum to adult end, they desire more freedom and participation. By letting them mature, we can improve their performance but if we keep strict controls, we tend to resist their maturity. Hence, the need for participatory management.

Participatory management is a managerial style that seeks to provide two-way communication and involvement of sub-ordinates in decision making process. It is one among many managerial styles and is not necessarily the best in all situations. However, in certain situations, it is the most efficient form of management. So when is participatory management the most efficient form of management ? It has been observed that an optimal level of participation is good for a company depending on its organizational climate and employee profile. For instance, workers in India have high dependence needs, wants to be directed and lack team orientation. For them, participatory management may not be the appropriate style. However, in case of BPO companies and silicon companies like Infosys, Wipro and Google, employees are well educated and experts in their work. If conducive work environment prevails, participatory management can be introduced in these companies. A few pre-requisites for participatory management are:

1. The participant should have the ability – intelligence and knowledge – to participate. (of course, autocratic style is more preferable for unskilled labourers !).
2. Participation is most suitable for companies where many emerging decision situations arise.
3. Potential benefits of participation should be more than the costs (in terms of time).
4. The subject of participation must be relevant to the employee : otherwise she perceives it as another work load !

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• Advantages of Participatory Management

If the pre-requisites are fulfilled, it is strongly recommended to go for participatory management. This is because of the following advantages of participation of workers in management :

1. **Fulfilment of needs :**
   Participatory management fulfils many essential needs of the employee. For example, better two-way communication provides a sense of security to the employee. Participation leads to greater job control which, in turn, fulfils their self-esteem needs. Freedom at work place motivates employees to fulfil their potential for self-actualization. All this leads to higher job satisfaction and lower attrition. Employees' creative contribution helps the organization to innovate and come out with new and more efficient work routines.

2. **Employee Health :**
   According to the job control – job decision model of Karesek (discussed in the section on stress), stressful jobs are those where job demand is high but job control is low. On the other hand, if job control is high the job isn't as stressful. Stress is a dangerous psychological and physiological condition that not only affects employee health but also their performance at the work-place. Participation is an effective way to increase the resources at the disposal of the employee to help her cope with work-related stressors.

3. **Ego Involvement :**
   Participation implies mental and emotional involvement rather than mere muscular activity. It is due to this reason that employees start contributing extra in terms of creative work and better performance. For example, employees at Google India are encouraged to participate in product design strategy related decisions. Many of its products are creative output of its employees.

4. **Acceptance of Responsibility :**
   Participation encourages people to accept responsibility in their group's activities. Participation is a **social process** by which people become self-involved in the organization. They become responsible **employee-citizens** rather than machine-like performers. As an employee begins to accept responsibility for group activities, she becomes more receptive to team work, because she sees in it a means to fulfil group goals.
   This responsibility that workers can take up is helpful to the organization in times of emergency. For example, managers in many manufacturing companies (take, for example, Tata Steel where I worked) are recent graduates. Their knowledge of shop-floor activity is limited; their theoretical knowhow often doesn't match with praticality. Involvement of junior employees in decision making process helps in better management of the concern. It leads to better performance, lesser breakdowns and faster trouble-shooting.

5. **Other Benefits of Participatory Management :**
   Participatory management makes any decision to change easier. In many industries, the decisions taken are top-down. Workers feel that their interests haven't been amply considered before making any major change. Often they resort to strikes, trade union militantism and in worse situation vandalism. Participation of skilled workers in taking decisions goes a long way in better acceptance of change.
   Secondly, **organizational power** increases with participative management. Contrary to common perceptions, power in organizations is not a zero sum game. The autocratic view of management is that power is a fixed quantity, so someone must lose what another gains. The view of participatory management

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is that power can be increased without taking it from someone else. In participatory management, the employee's power increases because she gets to influence the decision-making process. At the same time, the manager's power over the employee increases because now the employee is personally responsible for execution of the decision !

Besides above, there are other benefits like **better communication** (due to cooperation and consultation through the organizational hierarchy).

Managerial Effectiveness

Research on managerial effectiveness seeks to find out variables (person and environmental) that have links to effective managerial behaviour. Some research findings have linked managerial effectiveness to role behaviours (Mintzberg, 1973), coping with pressure and adversity, integrity (Kaplan, 1997), and knowledge of the job (Kotter, 1988). Gregson, Morrison and Black (1998) have identified five characteristics of successful global leaders :

1. Context specific knowledge and skills
2. Inquisitiveness
3. Personal character, including integrity
4. Duality i.e. the ability to manage both uncertainty and tension and
5. Savvy (business savvy)

Some factors involved in effective managerial behaviour can be discussed in detail :

1. **Role Performance :** An essential measure of managerial effectiveness is the way managerial roles are performed. What are these roles ? Mintzberg has concluded that managers carry out tens different roles which are highly inter-dependent. These can be grouped as : **interpersonal, informational and decisional** roles. What is the manager's interpersonal relation with his subordinates? With his boss and with the clients of the company ? Secondly, how effectively does he monitor the information flow in the organization ? His task also includes dissemination of information. As the decision-making authority, he decides on the **resource-allocation** to various departments and tasks, and represents the organization during negotiations.
2. **Learning behaviours :** This includes the willingness and motivation to work and learn with changing times and across cultural differences. It also includes the capacity to take ready feedback and to learn from workplace experiences.
3. **Resilience** is the ability to manage stressful situations, and yet be resilient in the face of immense pressure.
4. Finally, **business knowledge,** that is, a hold over concepts of how to conduct business affects managerial effectiveness.

Some studies have tried to link basic traits like personality to managerial effectiveness but the research findings have been largely inconclusive.

Stress and its Management

Stress refers to a psycho-physiological state that results when certain features of an individual's environment attack or impinge on that person; these features create an actual or perceived imbalance between demand and capability to adjust stress is dealt in detail in the chapter on health psychology.

In this section, we will deal with certain issues related to stress in the workplace. Organizational stress is not necessarily negative. In deed, stress has both positive consequences (eustress) and negative consequences (strain). Relation between stress and performance is

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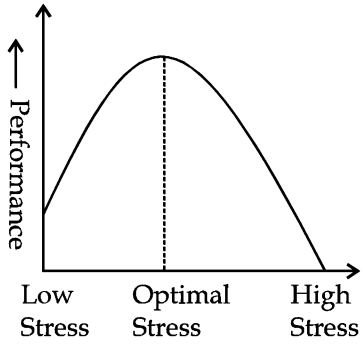
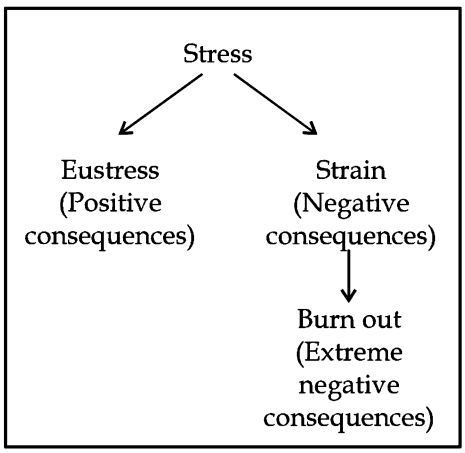
curvilinear. Hence, for any individual, the effect of stress can be represented as :



The exact nature of stress on an individual and its impact on her depends on many mediating factors. But before that, let us discuss the causes of job stress i.e. stressors at the job site.



Causes of Job Stress

Job stress may be due to demands within the work environment or by non-work demands. The four major categories of job stressors I seek to discuss here are :

1. Physical stressors
2. Task stressors
3. Role stressors
4. Interpersonal stressors

1. **Physical stressors** refer to aversive physical working conditions, or strenuous work environments. This includes poor ergonomics in the workplace. The condition is even worse in, say, industrial construction and steel making industry. There is high noise, heat, dirty working climate etc to handle. Such physical conditions lead to chronically aroused state and finally, exhaustion in the individual employee.
2. **Task-related job stressors** include a wide range of job content and job context factors like work overload, time pressure, lack of control over work (as it happens under directive style of leader) and poor career opportunities. Lack of control (and decision-making power) leads to extreme stress, especially when work demand is high. Factors like job insecurity create anxiety about future job loss while poor career opportunities lead to frustration. Even when new technologies are introduced, it leads to job stress as one has to learn new skills. An acquaintance of mine in a software company once observed that software technologies change every year and they have to consistently upgrade their skills. If you are an expert in Java, if is of not much use in another platform (say C#) that has just been developed. This poses greater stress especially for aged employees.
3. **Role Stressors** in the workplace are primarily of two types : (a) Role conflict and (b) Role

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ambiguity.

Role conflict emerges in the organization due to the dynamics of role expectations from the employee and her ability at role performance. **Interrole conflict** occurs when the expectations of different roles (e.g. the role of an employee and a mother) are in cnflict. **Intrarole conflict** occurs when the role expectations of different people (ex. of the boss and of a colleague) are in conflict with each other and other **Person-role conflict** happens when one's personal beliefs and values are in conflict with the role that she is expected to perform (for example, if a sales manager believes that client shouldn't be cheated but his organization asks him to use some devious tactics to increase sales). A.K. Srivastava (1985) conducted a study using standardized psychometric tools on a group of 400 first-line supervisors (technical). He assessed the supervisors' role stress, need achievement and job anxiety. From ANOVA he found that role conflict and role ambiguity have a significant effect on anxiety pertaining to job life.

4. **Interpersonal stressors** pertain to stress due to leadership styles, organizational politics, discrimination at the workplace, sexual harassment and abrasive personalities. 'The two most stressful leadership styles for people at work are rigid, autocratic leadership behaviours and laissez-faire, or very passive leadership behaviours. Abrasive personalities can be the source of intense interpersonal stress and emotional pain on the job. Organizational politics is a source of job stress, with some research showing that it has a great adverse impact on women than men. Poor diversity management leads to job stress for the minority worker who feels there are unequal workplace barriers to success. Sexual harassment is a major job stressor, most often for women' (Encyclopedia of Applied Psychology, Vol. 2, 2004, P. 468).

Non-work stressors like marital and family problems can also lead to stress at the job place.

Models of Job Stress

Broadly, there are three kinds of models of job stress : 1. Interactional model, 2. Moderator models and 3. Transactional models. Early models of job stress were interactional models i.e. were focussed on the cause of job stress (stimulus) and its impact (response). Most of these models postulated that the more demanding the stressor, the greater the chance that it would lead to strain. Later, researchers realized that stressor-strain relationship may be moderated by other factors like age, gender and individual differences. Both the models had their limitations. Though both tried to explain the relation between stressors and their consequences (strain), both ignored the **stress process.**

Transactional models were then developed to understand the stress process i.e. how stress develops and proceeds, rather than just the consequences. These models often used the idea of fit. Stress happens due to failure of a proper person-environment fit. Due to misfit between environmental demands and individual's perceived capacity to meet these, stress response develops. This concept of fit helped these researchers explain job stress as a process.

Now, let us look at some specific theories that will be of use to us in understanding this chapter in depth.

- **The Person-Environment fit theory** (P-E fit theory) assumes that stress occurs because of incongruity between person and her environment. This incongruity can be

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between demands of the environment and the abilities and competencies of the individual, or between the needs of the person and supplies from the environment.

- **The Job demand-Job control model** states that there are two basic dimensions of work place factors – job demand and job control. Job demands are the workload demands put on the individual, while job decision latitude refers to the employer's ability to take decisions and hence be in control of the work. **Karasek (1979)** combined the two dimensions to arrive at a 2-by-2 matrix, that can be represented as :

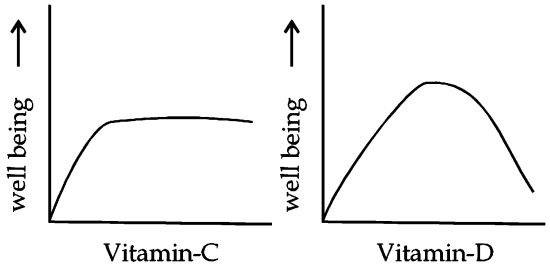
Job control

Job Demand	Low	High
High	High-strain jobs	Active jobs
Low	Passive jobs	Low strain jobs

This theory proposes that stressors' impact is most severe when job control is low and job demand is high.

- **The Vitamin model** was proposed by Warr (1987) to specify the relationship between stressors and employee health and well-being. Drawing an analogy with vitamins, he assumes that there are two types of work characteristics.

  Some features of work have a linear effect upto a level, after which the effect becomes constant; just like the effect of Vitamin-C on body. For example, salary, safety etc. are such factors. Some other work features have a curvilinear relationship on employee well-being, just like Vitamin D (Excess of Vitamin D may cause skin cancer). Examples are job autonomy, social support and skill utilization.



Consequences of Job Stress

Job stress can lead to both positive consequences (eustress) or negative consequences (strain). An extreme form of negative consequence is burnout. The exact nature of stress depends on many mediating factors (to be discussed next) and the intensity of stressors. **Eustress** or healthy stress leads to better performance and even health benefits like cardiovascular efficiency that one gets from aerobic fitness.

Strain, on the other hand, leads to both psychological and physical ill-health. It leads to greater absenteeism and lower performance output. Burnout is a special form of strain. Maslah (1982) has used a three-dimensional vices to define burnout. The three primary elements of burnout, according to him are :

1. Emotional exhaustion
2. Depersonalization and
3. Lack of personal accomplishment

The employee suffering burnout is emotionally exhausted and doesn't have any

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emotional energy to manage a stressful encounter. Then the individual starts seeing herself as an object and treats herself in a detached way. This is depersonification. Finally, there is a lack of personal accomplishments i.e. a tendency to devalue performance in negative ways.

Mediating Factors

As already pointed out, stress doesn't always lead to strain and when it does, there are many mediating factors that decide on the effect of stress. These mediating factors are alternately called **resources.** Resources refer to the conditions within the workplace and to individual characteristics that can be used by the individual to cope with stress. Some important mediating factors are :

Work conditions

1. Control at work
2. Social support and work group factors

Individual characteristics

1. Coping styles
2. Self-esteem and self-efficacy
3. Personality traits

1. **Control at work** : Control at work refers to an employee's opportunity to influence one's work behaviour in relation to work goals. Many studies have been conducted within the framework of Karasek's (1979) job demand-job control model. It has been found that individuals in high strain jobs often suffer from cardiovascular illness (high strain jobs are those in which job demand is high but control is low). In a qualitative review of empirical studies on job demand-job control model, it was found that individuals in high-strain jobs show the lowest scores in psychological well-being (Van Der Doef and Maes, 1999).

2. **Social Support and Work Group Factors** : House (1981) has reasoned that social support is the resource provided by others (peers) in terms of emotional, informational and instrumental support. Support enhances needs directly by satiating *needs for affiliation, approval* and *security*. It also enhances *self-esteem needs* of the individual employee. Secondly, social support reduces inter-personal tensions. One of the major stressors at work place is social stressors that can be reduced by a conducive social environment. A recent meta-analysis by Viswesvaran and his colleagues (1999) has shown that social support is negatively related to strain.

   Work group factors like group cohesion and team climate also play a significant role in reducing the effects of stress. Small groups provide psychological safety and collective efficacy that buffer the negative effects of stressors. Indeed, strong evidence exists that individuals who work in teams experience better well-being than those who work alone (Carter and West, 1999).

3. **Coping styles** : When facing stressful demands from environment, individuals make certain cognitive and behavioural efforts to manage them. These efforts are called coping strategies. According to Lazarus and Folkman (1994), coping refers to the 'constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person (p. 141). Important styles are :
   (a) Problem-focused coping
   (b) Emotion-focused coping
   (c) Avoidance coping

   Empirical studies have concluded that problem-focused coping lead to better health while avoidance and emotion-focused styles lead to poorer well-being. **Sharma and**

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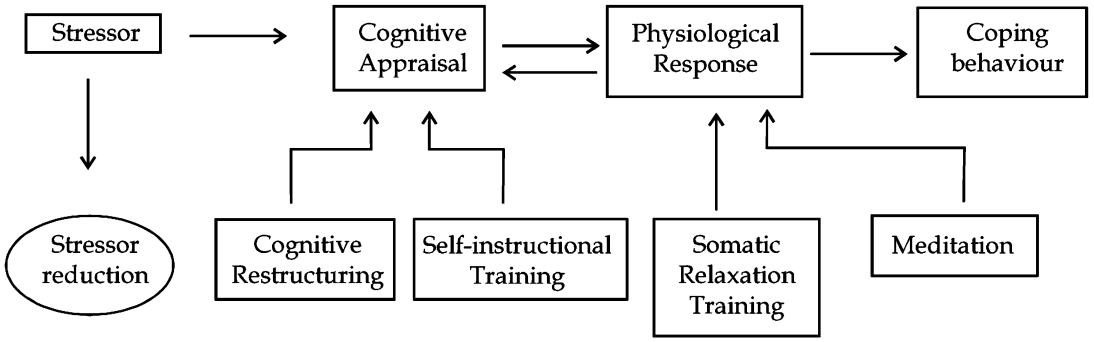

Diagram 1 : An overview of stress management programs and the stress-mechanism they target. Based on Passer and Smith (2007, P. 505)

Acharya (1991) studied role stress and coping behaviour among electrical engineers. They conclusively found that engineers who utilized avoidance coping compared to those who used approach coping (i.e. a style in which one directly approaches the problem) had higher job anxiety.

4. **Self-efficacy and Locus of Control** : Self-efficacy has been found to mediate between stress and its consequences. Self-efficacy is the individual's belief that she is competent enough to face a challenging work. Self-efficacy increases one's confidence and she makes a more positive cognitive appraisal of a stressful situation than another person who is low on self-efficacy.

   A similar concept is that of **locus of control.** Individuals with internal locus of control see themselves as able to control their lives. When one feels that she is in control of her life, she tends to exert more direct action against stressors. Daniels and Gupy (1990) had conducted a longitudinal study in which they found a positive effect of an internal locus of control on well-being of workers.

5. **Personality factors** : An individual's personality has significant influence on her ability to withstand stress. Introverts tend to withdraw from interpersonal relations that produce stress (i.e. show avoidance coping style) and by avoiding communication make interaction and problem solving more difficult. Personality of an individual affects the way she appraises a specific situation as stressful and also her response to the perceived stressor. Considerable research has been conducted on the differences of type A personality and type B personality in their coping response. Type A people are characterized by impatience, competitive

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spirit, restlessness and aggression. The dominant hypothesis is that type-A personality has negative effect on stress coping. However, the relation between personality type and strain is still debatable. **Michael Frese** observes that while type-A behaviour shows enhanced stress in one study, it shows attenuated stress in another. Other research results also have been inconclusive.

Stress Management

In view of the negative impacts of stress on employees and the organization at large, it becomes necessary to take some stress intervention measures, both at the organizational and individual level. Best way to reduce stress is the removal of stressors. But that isn't always practicable. Hence, psychologists have devised therapies to help the client manage cognitive appraisals and physiological responses.

To attack stress, we need to attack at every mechanism involved in stress. These are represented in the figure. Also, we need to discuss various changes that can be brought about at the organizational and individual levels to increase resources and reduce stressors.

1. Stress Management Programs

Some stress management programs I intend to analyze here are :

- Cognitive Appraisal Management
  Ex. Cognitive restructuring using RET
  Self-instructional training of Meichenbaum
- Physiological response management
  Ex. Somatic relaxation training
  Meditating and Yoga

Cognitive appraisal plays a central role in determining how we perceive stress. This is the reason why leading cognitive theorists like Ellis and Lazarus believe that controlling cognitions is the most powerful means to control stress.

Ellis (1962) believes that a relatively small number of **irrational core belief** lie at the root of maladaptive negative emotions. Due to these core beliefs, we become more vulnerable, emotionally, to stressors than otherwise. **Cognitive restructuring** is a technique to systematically detect, challenge and replace these core irrational beliefs. Ellis' RET is an important and popular therapy under cognitive restructuring techniques.

An alterlate approach is **Self-instructional training. Mandelbaum** (1965) reasoned that if people can learn to talk to themselves, they can change their cognitions in order to perceive stressors differently. This would help them to better cope with stress. In self-instructional training (SIT), the therapist prepares different self-instructions for the client to use at four critical stages of the stressful episode :

1. Preparing for the stressor
2. Confronting the stressor
3. Dealing with the feeling of being overwhelmed
4. Appraising coping efforts after the stressful situation (i.e. evaluation for future feedback).

Let us take the example of the software engineer who has to submit a project in two days. She can 'prepare for the stressor' by reasoning that if she remains focused, she can complete it. "Worrying won't help ..... rather it will decrease my performance".

"I will do my best and not worry".

Confronting the stressor entails a different set of instructions like : "As long as I am cool, I am in control of the situation".

When coping with the feeling of being overwhelmed, she may instruct herself : "Take a deep breath. Relax and Slow things down"; "Focus !".

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In the last stage, the software engineer would appraise the situation and how she coped with it. It helps her to get feedback for better coping next time.

Stress management training also includes training people to control their **physiological responses** in stressful situations. Two popular techniques are :

1. Somatic relaxation training
2. Cognitive relaxation via meditation, yoga etc.

Somatic relaxation training works on the principle that a person can't be aroused and relaxed at the same time. In this training, people pair tension release with a trigger word by classical conditioning.

Step 1 : Tense various muscles of the body.

Step 2 : Mentally say the trigger word (ex. "Relax") and relax your muscles.

After this conditioning exercise, whenever the person feels stressed out, he can mentally say the trigger word ("Relax"). Due to conditioning, physiological relaxation will take place.

Meditation and Yoga are approaches to relax the mind rather than the body only. Evidence exists that meditation also leads to physiological changes in blood pressure and heart beat. There are many techniques of meditation ..... in one, the person sits quietly in a comfortable position with eyes closed and mentally concentrates on the word "Om" with each exhalation.

The Stress Reduction and Relaxation Program (SRRP) was designed by Dr. Cabot Zinn of University of Massachussets, on the lines of **Hatha Yoga.** It is a popular program in organizations in managing stress. Yoga has also been found to show therapeutic value in dealing with PTSD. Recently, a professor of Psychiatry at New York Medical College, Dr. Gerberg, demonstrated the effect of yoga on PTSD suffering tsunami sufferers of Tamil Nadu. She found that yoga has superior effect than counselling in reducing stress.

The scientific basis of meditating and yoga comes from the fact that these techniques consciously control alpha waves in brain. These α waves are related to feeling of tranquility and hence prevent chronic stress and tension.

Both somatic relaxation training and cognitive relaxation (yoga etc.) are potent tools to manage stress. While somatic relaxation is more potent in managing an unpredictable stressor, meditation is more potent in controlling chronic stressors.

2. Stressor Reduction :

A major goal of stress management programs is to educate employees and employers about various sources of stressors. Once individuals know about a source of stress, they can try to use problem solving techniques to alleviate it. For example, once aware that large noise is causing negative affect and physiological arousal, the employees can wear ear plugs when in factory. **Ergonomics** can be used to reduce stressors. For example, what is the optimal assembly line speed to match the worker's ability ? Finding it out and using ergonomics can reduce physical stressors.

3. Increase in resources

Resources at the disposal of the individual employee, like job control, can be increased so as to reduce stressors. Participation in decision making and training to impart skills and increase competence are appropriate resource addition steps. Training reduces strain because it helps the employee work smarter, not harder. Training increases the **Person-Environment (P-E) fit** by increasing competence of employees to deal with work environment.

Increasing two-way communication is an important resource increase step. This is because even if employees aren't given significant job control, better two-way communication helps

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employees voice their problems. This is better as it helps the employees and management both to directly approach (i.e. problem-focused coping) the stressors. An additional resource, according to Frese (1999), is **social support**. Social support can be increased by forming small groups for team work and management training.

4. Lifestyle changes

Changes in lifestyle of employees (healthy diet, low alcohol and tobacco consumption, physical exercise and playing sports etc.) help in enhancing well-being and reducing stress. Unfortunately, the modern lifestyle is haphazard and doesn't follow any disciplined routine. A diary study by Sonnentag has revealed that work-related activities performed in leisure time have a negative impact on a person's well-being. Other studies have also confirmed that a proper *work-leisure balance* is part of a healthy lifestyle. Taking note of this, many Indian companies have started building gyms near work-place. Infosys Bangalore, for example, has a state-of-the-art gym in its work campus. In many companies the staircase is made salient so that employees take the stair case (rather than lift) to work. Such relatively small amount of daily physical exercise (such as walking to work and walking stairs) have an enormously positive effect on handling stress.

Power and Politics

Power refers to a psychological force at the disposal of one person that can influence the behaviour of another. Politics in an organizational context refers to activities of an individual or group to obtain, enlarge and use power. It must be understood that in interpersonal relations, power is not a static quantity. It is dynamic. Various processes that are involved in power in organizations can be studied as :

1. Power dynamics
2. Bases of power
3. Sources of power
4. Politics and political tactics

Power Dynamics

Power leads to change in behaviour, but what are the psychological processes underlying the change of behaviour ?

Power is the ability to influence the behaviour of others. Hence, power is a potential while influence is the actual application of power. How power is applied by leaders over followers is an area of concern of social psychologists. According to Kelman (1958), there are three types of influence processes :

1. Compliance
2. Internalization
3. Identification

Compliance is a surface change in behaviour. Owing to coercion ("carrots and stick"). It is based on legitimate power. Compliance, however, doesn't lead to any change in the target individual's attitude owing to this, the influence persists only when the behaviour is under surveillance. **Internalization** on the other hand, means subjective acceptance of leader's power by follower. As a result, the follower's attitude changes. While compliance lasts only as long as the employee is under surveillance, an internalized follower continues the behaviour even without surveillance.

Identification is based on the actor's charisma. The followers imitate her behaviour and attitudes to gain her approval. Identification happens when employees' need for acceptance and self-esteem are fulfilled by leader's close rapport with followers.

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Psychological Process	Behaviour
Compliance	Temporary
Internalization	Permanent
Identification	Motivated

Bases and sources of Power

To understand the bases of power, we will discuss the taxonomy forwarded by French and Raven (1959) :

1. Reward
2. Coercion
3. Legitimacy
4. Reference
5. Expertise
6. Information

Reward and Coercion are based on behaviourist notions of reinforcement and punishment to influence behaviour. These two bases only lead to behavioural changes without any change in the underlying attitudes and values. Even the behavioural change is subject to continued surveillance. An individual possesses **legitimate power** when she derives the power from the charter of the company. Compliance, internalization and identification – all three are involved in legitimate power. The director of a firm can use power on subordinates by compliance or internalization ("The director has asked as to do it !"). Also, employees identify with her.

Referant power is based on followers' *identification* with the agent. If my boss is my role model, I will try to imitate him and do what she asks me to do.

Expert power is the ability of an individual to perform a task no one else can. For example, design engineers have more power than software engineers in a company because design engineers are few and have domain expertise. If a person is an expert on an issue, followers *internalize* the fact that she is an expert and follow her suggestions.

Informational power leads to cognitive changes in the subject (on whom power is applied), leading to *internalization*.

The sources of power can be broadly grouped as :

1. Position power
2. Personal power

Position power is based on formal position in the organization while personal power on the inter-personal rapport between agent and subject. Various influence processes, bases of power and sources of power and their relation can be represented as under :

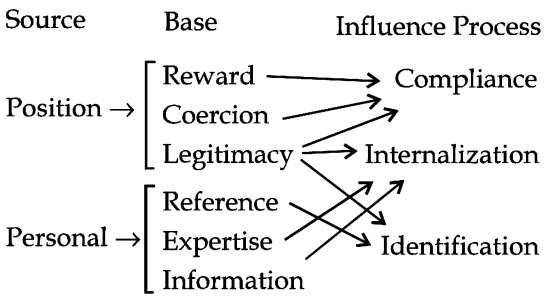

Fig. : Relationship of sources and bases of power and influence types. Adopted from Encyclopaedia of Applied Psychology, Vol-3 (2004, P. 93)

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Politics

Organizational power enables an employee to influence the decision-making process. Hence, every employee yearns for more power. Politics refers to all activities undertaken by the employee to gain power. A few strategies for playing politics are discussed below :

1. Increasing indispensability :

Power comes from indispensability. One of the prime tactic is to increase indispensability. This can be done by increasing centrality or increasing expert knowledge. An individual can increase her centrality by deliberately accepting responsibilities that bring her into contact with many functions or with many managers. She then can increase the dependence of others on her.

Specialized organizational skills that are indispensable for the organization can lend immense power. When I was working in a steel company as a new recruit, certain employees never disclosed their technical skills to me, lest I understand how things work and trouble-shoot during problems. This way they take all credit for troubleshooting work.

2. Mentoring :

By developing good rapport with a powerful manager, it is possible to rise up the organizational ladder with him. This is beneficial to the top managers also. Top managers often act as mentors to aspiring lower level managers as planning for succession is an important political tactic. The protege gains power by attaching to the top manager as protege. The top manager consolidates his power by grooming him for succession.

3. Coalitions :

This is a common political tactic in many organizations. Coalitions are often built around a trade-off. I support you on an issue of interest of yours, in return you support me on an issue of interest of mine. Coalitions can be both internal and external. Coalitions can be built at various levels in the organization, so also with external entities like customers and officers of financial institutions from which the company gets its capital.

Coalitions are dynamic in nature as they are made and broken easily depending on environmental conditions. Hence, there is a need for coalition management. **Co-option** is an important strategy for coalition management. It allows one sub-unit to overcome the opposition of a second sub-unit by involving it in decision making. For example, giving an opponent an important managerial role makes him a part of the coalition.

4. Manipulating the decision-making process:

Politics refers to all activities motivated towards gaining power. Power is the ability to influence organizational decisions. One of the political tactics is to control the decision making process itself. This can be done by controlling the agenda or bringing in an outside expert. Typically, managers and coalitions try to control various business committees. By this, they can control the agenda that has to be tabled in a meeting on a given day. Alternatively, the manager can bring in an outside expert who subscribes to his view.

The outside expert is supposed to be neutral and an expert on the issue. This lends a legitimacy to the manager's position. In many cases, the outside expert is not neutral at all and

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has due knowledge of the coalition's views.

5. **Devious Tactics :**

Devious political tactics are those that are morally difficult to defend. A few devious tactics often used in organizations are :

- Divide and rule
- Backstabbing
- Preventing the opposing faction from attending the key meetings or gatherings

Divide and rule is practised by playing two rival factions against each other. To do this, the manager/coalition spreads rumours or encourages competition between the two factions. As opponents stay divided and weak, the coalition consolidates its power. Backstabbing happens when an employee X attempts to have a pleasant relation with employee Y, all this time planning Y's demise.

Costs and Benefits of Organizational Politics

Organizational politics is an integral and inevitable part of the organization. Due to a hierarchy with few people at the top, the control of scarce resources like promotions and budgets becomes inevitable. It does not mean that politics is evil. Politics has the following positive functions towards organizational effectiveness :

1. It can improve the choices and decisions that an organization makes.
2. An organization that confers power on those who help it the most can take advantage of political process to improve managerial effectiveness.

However, excess of politics can turn out to be dysfunctional. Politics can promote conflict; excessive politics will mean more time spent on fighting over resources allocation and making decisions rather than implementing decisions.

An organization reaps the benefits of politics based on the assumption that power flows to those who can contribute to the organization most. Suppose that the top management becomes entrenched and is able to defend its power and property against its opponents. Even if the performance suffers, the top management has institutionalized power by occupying all important roles in decision making committees. In such a case, flow of power to the deserving will be choked.

Hence, politics in organizations has both positives and negatives. To reap the benefits accruing from the political process, the organization must maintain a **balance of power** between various coalitions and stakeholders. Whether power and politics benefit or harm an organization is a function of the balance of power between organizational groups.

Power and Politics in Indian Organisations

As in other aspects of organisational culture, cross-cultural variations exist in power relations and politics in organisations. Hence, we should investigate into the nature of power play in Indian context. Luckily a detailed study has been made by Sinha. Sinha has also drawn upon many other research studies to come to the following tentative conclusions about power relationships in Indian organisations (discussed in Dwivedi, 1995) :

1. **Unwarranted power conflict** is widespread in Indian organisations. Many managers have false apprehensions that others are conspiring against them. Such premature impressions lead to reactive application of

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power. Many employees are suspicious that other employee may be upto some mischief. Such as back stabbing, reporting negatively to higher authority etc. Mutual suspicions develop ultimately leading to power conflicts.

2. **Personal linkages of caste and kin groups** make the power relations very complex. A manager, who has 'contacts' in the government or politics, can draw upon thse external agents to play politics in the organisation. It is very rampant in public sector units. Even a peon, or an attendant can play politics if she is from a caste many local ministers are from; or if she has a relative in a strong position in the bureaucracy. Even in the private sector, many people try to be in the good books of IRS officers, so that they could use their contacts to enhance their status inside the organisation !
3. **Authority system** is the preferred form of distribution of power and privileges in Indian organisations. Indian workers and executives prefer a hierarchical order of power. This may be because, reasons Sinha, the **Indian social structure** (based on the hierarchy of castes) creates a tendency to prefer hierarchy. In most organisations in India, a bureaucratic set up is in place, where an employee looks up to her supervisors for guidance and patronage, and provides the same to her subordinates.
4. **An accommodative-manipulative game of politics** is widely prevalent in several Indian organisations. In this game, the strategy of a player (i.e. an employee) is to enhance her own power base and erode the power base of those employees who are a threat to her influence in the organisation. However, all this manipulation is accommodative, that is, employees indulge in this game without resorting to any open conflict.
5. The lesser the **power differential** (difference between perceived power) between two employees, the greater is the politics they play to dominate each other, at times leading to open conflict.

$$\text{Power Conflict} = \frac{1}{\text{Power Differential}}$$

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Consumer Psychology

Consumer Psychology is the study of psychological processes underlying the acquisition, consumption and disposition of goods, services, and ideas. In this section, I seek to introduce you to consumer psychology. One way to do this is to discuss the consumer buying process. Five major areas of study in consumer psychology are environmental factors, information reception, memory systems, person factors and decision making. These can be represented as a model shown below. Each of the factors are discussed next.

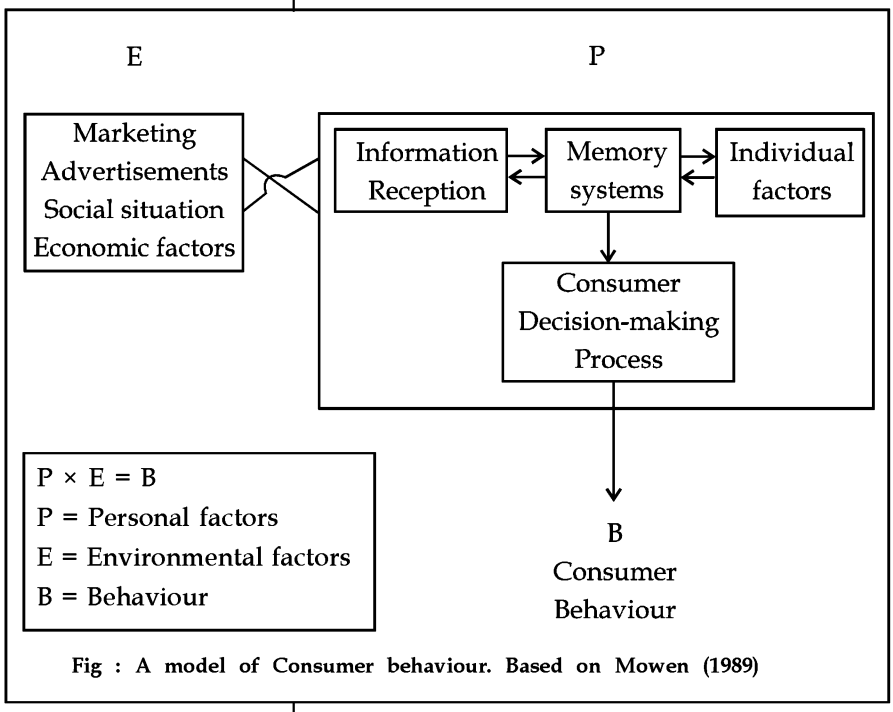

Fig : A model of Consumer behaviour. Based on Mowen (1989)

1. Environmental factors :

There are many external stimuli that intent to influence consumer behaviour. Some of these are marketing appeals, economic factors and feedback of the outcomes of previous purchases. Marketing appeals include various advertisements, product packaging and sales messages. Indeed, marketers are involved in a great deal of research before designing these messages. They are involved in marketing research to find out customer preferences, and also what internal factors of the customer may induce her to buy a product.

On a different note, the consumer situation in which consumer takes her decision also makes a difference. If you frequently visit shopping malls, you already know that the ambience and appearance has an impact on behaviour. You can easily get a cold drink at Rs. 10/- but still many prefer to take their cold drink in big restaurants after paying a hundred bucks for it ! The **social situation** also has a major impact on consumer behaviour. **Social conformity** in buying behaviour has been observed. In one study, Venkatesan (1966) asked a consumer to select a business suit. Even though all suits were identical, the individual preferred the garment preferred by other members of his group. This study was modelled on the lines of the Asch (1956) conformity

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study. Once, I had purchased a pink T-shirt even though I knew pink isn't the colour of guys. This was because all my friends told me that it looked good on me !

The ultimate goal of the consumer also determines her behaviour. For example, if I want to purchase a product to gift it, my behaviour is much different than that if I purchase a product for myself. People who are self-conscious about their looks are quite concerned about the brand of clothes they purchase. I often purchase shoes from the neighbourhood shoe vendor. But a friend of mine always gets Nike stuff (he has a girlfriend!).

2. Information Reception :

This aspect of the consumption process deals with the field of attention and perception. What are the factors that determine whether a customer exposes herself to an ad ? If she does so, how much of the information she attends to ? If she attends to the information, how does she process it ?

Human attention is discriminate and selective. This poses a problem for advertisers to convey their message. It has been found that there are two types of attention – *voluntary* and *involuntary*.

Voluntary attention allocates mental effort to goals and plans. The processing of information in this channel is *central processing* and leads to a long-term cognitive attitude change. Those who want their advertisements to be voluntarily processed make their message relevant to these goals and plans so as to draw voluntary attention. Involuntary attention, on the other hand, leads to *peripheral* processing of information. Some strategies to exploit this channel of attention are *novelty* in advertisement theme, loud music and making celebrities endorse it. To illustrate the two types of attention, let us take the hypothetical case of an advertiser who has to advertise about a coaching institute for civil service entrance preparation. This issue is of relevance to the target population; so they will be centrally processing it. For this, the ad must have significant information regarding the coaching. Yet, there are many students who develop an attitude towards the coaching by just seeing the photographs of successful students who endorse the coaching institute. These students basically do peripheral processing.

Both voluntary and involuntary attention are active cognitive processes. However, it has been found that the consumer can learn without active information processing, by a process called **low-involvement learning.** Krugman (1965) observes that consumer defences are lowered when messages are learnt by low-involvement. Hence, messages are received relatively uncritically and the consumer may later be prompted to buy products without any well-thought reason. This concept is called subliminal perception when the message received is too weak to be consciously perceived.

Consumer psychologists have also contributed in developing tools for assessment of information reception. For example, tools have been developed to measure pupil dilation and eye movements to estimate attention, that the consumer pays to a message. These tools have multiple usages in developing ads. For example, if I want to place an ad in a newspaper, which part of the ad will the consumer focus on? Consumer psychologists have developed elaborate eye-tracking devices to identify the features of an ad that capture a consumer's attention.

3. Memory System :

The consumer is bombarded with hundreds of messages everyday, most of which reach short-term memory and vanish. Only a few reach the long-term memory. Consumer psychologists are particularly interested in learning how consumers place information received about a product into long-term memory. The consumer is bombarded with hundreds of messages everyday about products. Some of the

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messages are attended to and then stored, while others are ignored and never placed into long-term memory. Consumer psychologists have come out with some interesting findings. For instance, **Sawyer** (1974) has found that repeated messages have a greater likelihood of being encoded. Other studies have shown that context acts as a cue in retrieval of information; hence changes in context affects the ability of people to retrieve information. Hence, advertisers should try to use *trademark logo* and *brand names* as reduced cues to remind the consumer of the whole product. Finally, images have been found to have better storage. Hence, images should preferably be used in advertisements and are superior to text advertisements.

4. Individual Person Factors :

When taking decisions about which product to purchase, the consumer often refers to her long-term memory. She tries to make rational cost-benefit analysis before making a choice. However, man is an irrational creature. Hence, the final judgement that is taken is subjective. In the subjective judgement, many other factors matter, like the consumer's personality, beliefs, motives, and attitudes. For example, I won't attend to a banner on costly clothes if I don't have the attitude towards that i.e. if I believe unbranded clothes that come cheap will satisfy my needs.

Similarly, there are many motivating factors that seek to motivate the consumer. Do you have these motivators on your ad ? Some major social motives are need for achievement, for affiliation, and for power. Take the hypothetical case of a cold-drink maker who wants to motivate the youth to purchase it. What should his ad be like? Most commercials of cold-drinks show groups of individuals having fun; this is because their target market (the youth) are most motivated by the need for affiliation.

At one time, Freud's psychoanalytic theory was very popular with consumer psychologists. There was an attempt to embed various symbols appealing to consumers' unconscious motives in TV and print ads. Today it has fallen into disrepute. Today, a popular activity among personality researchers is trying to predict liking and preferences for certain products. This is called **psychographics.** The philosophy behind psychographics is that self-concept often translates into a person's lifestyle. Understanding lifestyle preferences helps in better targeting products towards consumers.

'An example of psychographics may be found in a study by Sadalla and Burroughs (1981). These researchers investigated the eating preferences of individuals and how these preferences related to their opinions, interests, and activities. They classified food into five categories – vegetarian, gourmet, health, fast and synthetic. (Synthetic food are high-technology items like processed becon, instant eggs, instant breakfast drinks, and highly processed cheese snacks). They then identified individuals whose food preferences could be classified as fallin into one of the five categories. These same individuals then rated themselves on a variety of characteristics. In addition, another group of subjects described what they thought vegetarians, gourmets, high techers, and so on would like. The results were surprising. The way people rated themselves was in close agreement with the way others rated them. Vegetarians were seen as non-competitive, sexual and liking crafts and folk dancing. Gourmets were perceived as using drugs, living alone, and liberal. Their hobbies were glamour sports and gambling .....'

(Mowen, 1989).

Psychographic information can be extremely useful for marketers to design their ad. Suppose I want to design an ad for vegetarian food consumers, now I know what their values and lifestyle preferences are. I could easily use these in deciding on the theme of my advertisement.

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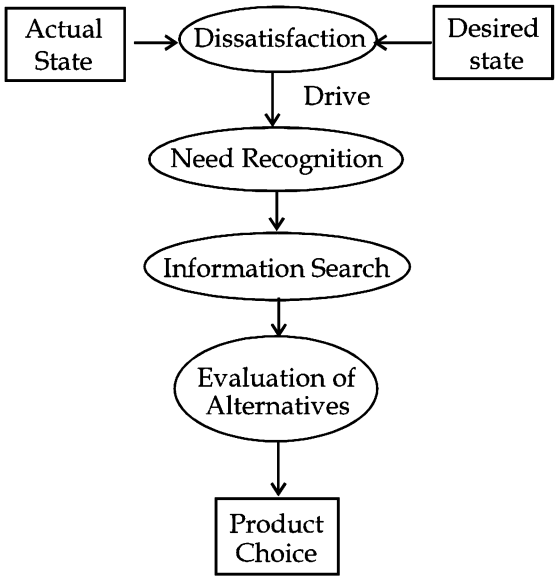
5. Consumer Decision Making :

This is the final step underlying any consumer behaviour. The process that consumer decision-making takes can be represented as under :



A dissatisfaction occurs when the consumer's actual state and desired state are not the same.

This dissatisfaction can in fact be created by repeatedly persuading to the consumer that the actual state lacks something. In deed, some companies create demand for their products ! For instance, if I get a cathartic fixation on a cell-phone. I visualize myself in a desired state where I have the ultra-hitech phone. Comparison of the two states leads to dissatisfaction (tension) which drives me to **need recognition.** Once I recognize my need, I search for information. There are two types of search processes : internal search in which I search my long-term memory for products that may solve my problem. I may try to recall advertisements, or the mobiles of friends that I have handled earlier. External search involved looking in newspaper classifieds, talking to friends and visiting the showroom. I may check for the phones on the internet or take referral opinions of my friends. After I have some alternatives to choose from (say iPhone, Nokia, Motorola, Samsung etc.), I will evaluate them based on subjective probability and weightages. I give to various attributes. Here, my personal attitude and preferences determine the weight I give to any specific feature

	Mobile-1	Mobile-2	Mobile-3
Camera	W_{11}	W_{12}	W_{13}
Music	W_{21}	W_{22}	W_{23}
Touch-screen	W_{31}	W_{32}	W_{33}

Suppose I want a mobile with very good sound and music quality, then the weightage I give to the second row in above box will be high. Suppose now that the quality of sound of mobile-2 is high; so W_{22} will be highest.

After the evaluation, I calculate the sum of weightages for all three mobiles and purchase one with largest weight. It must be reiterated now that we often do not do such rational calculations, rather use heuristics to decide upon a choice.

At times, we don't even make a choice. If you have gone shopping with your mother, you must have seen that she suddenly finds a product that she likes so much that she immediately purchases it without comparing it with other such products. Even when one is loyal to a brand, she doesn't make rational calculations before purchasing that specific brand.

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Ergonomics

Ergonomics is the branch of organizational psychology concerned with fitting jobs to people rather than people to jobs. The basic principle behind ergonomics is that both operator and machines are sub-systems of one single system. Since both operator and machine work towards a single goal (i.e. getting the job done) and they have to do it in co-ordination, they constitute a single system.

With rising complication of computing technology and machine design, it is seen that machines become unfriendly for operators to handle. This may lead to reduced performance, stress, errors in operation and accidents.

The scope of Ergonomics

Ergonomists design jobs, work places and equipments to maximize performance, and to minimize accidents, fatigue and energy expenditure. As such, the scope of ergonomics is very vast. If you make certain changes in your study table to make it more convenient for you to study, it is ergonomics. At the same time, if a manufacturer designs a car, the steps she takes to ensure driver's comfort are part of ergonomics. Human factor engineering is a part of ergonomics, but not necessarily all of ergonomics. Human Factor Engineering (HFE) is based on the man-machine system. But ergonomics is also concerned with comfort of the employee in the workplace, and of all employees. Focussing on the organization, the scope of ergonomics includes :

1. Product design
2. Workspace design
3. Workplace design
4. Research

Product design is the crucial stage of developing a product and selling it to the consumer. Ergonomists are involved in design of any product (from a mere sewing machine to sophisticated racing cars) that demands expert help to make machines user-friendly.

Workspace is the organization of a workstation for an individual worker. When the workspaces of an entire group or organization are combined, it is called **workplace. Workspace design** looks into issues prevailing in making the workstation of an employee more comfortable.

Workplace design, on the other hand, looks into issues of all employees' interactions. For example, when organizations try to reduce their bureaucratic structure, they desire to have a workplace where communication and approachability are easier. Ergonomists recommend to them **open offices.** Open offices means to eliminate private chambers. Groups of desks in one large area, divided by temporary partitions make an open office. Each employee's space in the open office is called a **cubicle.** Her comfort inside the cubicle is determined by workspace design.

Ergonomics is not based on any general principle. Ergonomists borrow from basic principles of psychology and certain engineering disciplines, but as such ergonomic design varies from situation to situation. Due to this, ergonomists require large amount of data. Many psychologists involved in **ergonomic research** provide these data through manuals and journal articles.

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- **Psychological Principles underlying Ergonomics**

Ergonomists see the work environment as a single man-machine system consisting of two information-processing sub-systems : man and machine. Ergonomists focus their attention on making the man-machine interface more user-friendly. This system can be represented as under :

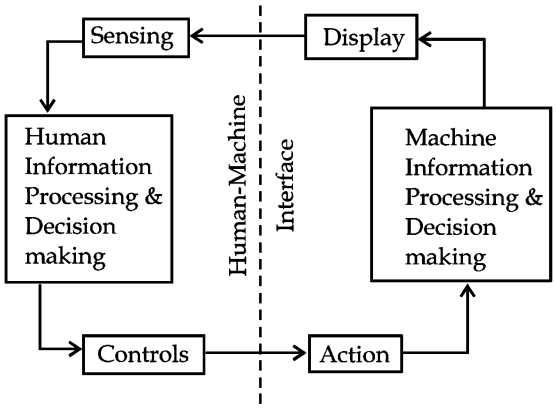

Figure : Man-machine system

A variety of psychological principles are used to engineer user-friendly machines. What needs to be understood here is that application varies from one case to another. Let us, however, discuss certain general principles.

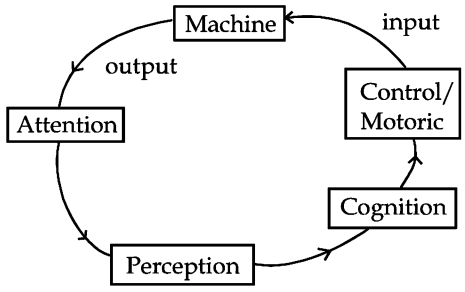

Fig. : Psychological variables in ergonomics

1. Attention

Various attentional principles that must be kept while designing an ergonomic task are psychophysics, attentional resource limits and processing. Attention refers to human ability to focus information processing on selective events over a specific period of time. **Psychophysics** tells us about the stimuli that fall between the absolute thresholds of human sensation. This principle is useful in ergonomics. For example, it is very difficult to detect changes in a plane travelling through fog (for the pilot). The concept of difference threshold is used to design sensors that amplify signals by certain ratio.

Signal detection theory tells us that attention is affected by both external and internal factors. USS Vincennes struck down a passenger plane fearing that it is an Iranian fighter aircraft. It committed such mistake because the commander's decision criterion was low. Also, people have a limit on the nature of vigilance tasks they can perform. During World War-2, radar operators missed some rare but critical messages on radar screen. It was because sustained vigilance by humans has limitations. Radars and other such machines need to be built taking care of this limitation.

Attention makes use of some resources, the amount of which is more or less constant and limited. The stimuli (data, pictures, graphs etc.) that an employee has to attend to mustn't lead to mental overload of the operator. Many instruments have been designed by engineering psychologists to measure mental workloads and attentional resources, such as the Subjective Workload Assessment Technique (SWAT) and NASA Task Load Index (Nasa TLI).

Attention can be both automatic and controlled. Automatic processing doesn't involve any effort, nor does it eat up much attentional

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resources. Certain tasks can be performed by automatic processing after training. Training helps in automating and routinizing some functions : this is taken into consideration when designing machines.

2. Perception

It is understood that both external stimuli and prior experience are used by perceptual schema to interpret the world. Illusions and hallucinations also occur because of top-down processing of information. This human limitation (a strength otherwise) poses a big challenge in designing displays. During World War-2, for example, many planes crashed because the altimeters were faulty and planes flying at low attitude couldn't make out figure-ground relations properly.

3. Cognitions

A group of ergonomists study how the operator can be aided in decision-making. This becomes essential because today the amount of information available in real-time is huge. For example, an operator sitting in the control room of a power plant has to go through numerous data. These data come in real-time and he has to refer to present and past data to make out the problem and decide a corrective step. Due to limitations of working memory capacity, he may fail or use biased heuristics. Two popular support aids provided by ergonomists to help the operator deal with this problem are :

- Knowledge-based supporting Aid
- Decision Support System

A knowledge-based supporting aid is a technical entity for information-processing that gives certain conclusions to the user. For instance, if I am a mechanical engineer and I went to trouble shoot problems in boiler of a power plant, I can feed data of past three days to the supporting aid and gets various graphs and analysis

Decision Support System (DSS) contains decision procedures for managers. There are thirty seven variables in a power-plant automation system. Decision to be taken depends on all these variables. This makes the number of possibilities to decide from more than a thousand. DSS provides guidelines to operators about what might have gone wrong. Without DSS, the operator has to base his decision on heuristics (based on past experiences) and memory recall.

4. Control/Motoric

Compatibility is one of the most important factors to be considered in system design. This is especially significant in stressful conditions where learned habits breakdown and cause errors in action. Technological development is continuously challenging the user friendliness of control. For example, lever is giving way to switch, switch to keyboard, keyboard to mouse and mouse to touch-screen. Ergonomists are involved in cutting-edge research in speech and automated image processing input.

Another major challenge for ergonomists is the modelling of sensori motoric regulation of operators in flight and driving tasks. **Tracking experiments** are a class of research conducted in this direction.

5. Anthropometrics and Population Stereotypes

The study of man's **physical configuration** is called anthropometrics. Body dimensions are important since the operator must fit the workspace in such a manner that he will be comfortable and will be able to utilize all the displays and control on-the-job. Take, for example, the construction of a seat in a heavy

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truck. To make the driver comfortable, various factors have to be optimal :

- Body measurement
- Reaction time
- Noise factor

But then, there is a problem here. We can't design trucks individually for drivers of all size. Hence, manufacturers use population stereotypes. Population stereotypes are a particular option that is chosen by a large proportion of a given population, that is statistically predominant. It can also mean any way of behaving that is predominant in the population. Ergonomists use these preferences of the majority to design their products. For example, to design the driver seat, I would first take data on height of various drivers, draw up a stereotype (i.e. height range in which majority of drivers fall) and design seats that will be optimal to them.

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6

Sport Psychology

n Sport Psychology

Sport Psychology refers to the scientific study of human behaviour and experience in sport. Sport psychology has two sub-units : it includes the researcher who studies sportsmen and their behaviours; and the sport psychologists who use the knowledge base of researchers to make psychological interventions in improving the performance of sportsmen.

What is the need for a sports psychologist ? Coaches and trainers focus almost exclusively on left brain activities including game plans, strategy and technique, speed, agility etc. Right brain activities include balance, emotions, music and visualization, all of which can enhance performance but these are often neglected by athletes. The job of a sport psychologist at the individual level is to develop and enhance skills based on right brain activities. At the group level, the psychologist examines various psychological factors operating at group level to assist in enhancing performance of sportsmen in team games.

n Psychological Interventions

A variety of psychological interventions are recommended to enhance the performance of sportspersons in both individual and team games. First, we would look at certain interventions common to most games, then go on to discuss certain psychological factors that specifically affect team games and how these can be remedied.

1. Arousal

The *Yerkes-Dodson law* states that an inverted U relation exists between arousal and performance i.e. an overaroused or underaroused individual can't perform her optimal best. Oxendine (1970) has verified this law in the case of many sports. Sports coaches aren't adapt at explaining what the optimal level of arousal is. An over-aroused sportsperson has lower concentration and inferior focus. Over-arousal also can lead to anger and aggression while playing. So how to ensure optimal level of arousal ?

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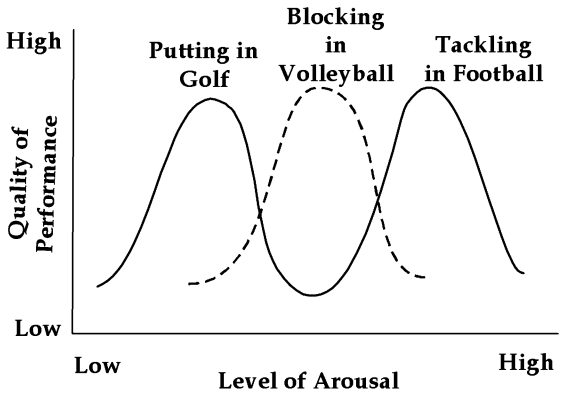
Oxendine (1979) observes that the amount of arousal necessary for optimal arousal is dependent on the **nature of the skill** involved in the game. Games which need complex skills need a lower level of arousal, because arousal interferes with cognitive activities such as concentration, fine muscle movement and coordination. For example, playing golf need great amount of concentration and calculation. Hence, it is not good for a person playing golf to be over-aroused. Similarly, in the case of shooting, sharp perceptual skills and attention are necessary. On the other hand, higher level of arousal benefits games that require less complex skills but more strength and endurance.



The sport psychologist usually first determines what level of arousal is good for a particular sports. Then the psychologist trains the sportsperson to maintain that level of arousal. Usually, a relaxation technique is learnt by the sportsperson. The psychologist conditions (by classical conditioning) a **trigger word** to the relaxation. Whenever the sportsperson thinks about the trigger word, she becomes relaxed. In the real sports, if she gets over-aroused at any time, she says the trigger word to herself, and immediately she becomes relaxed. Her state of extreme arousal is moderated.

2. Imagery

William Arthur Ward had once opined : "If you can imagine it you can achieve it. If you can dream if you can become it." He was basically stating how powerful a tool imagery is. Imagery is a cognitive process in which one uses her mind to **create an experience** that is similar to a physical event. **Karlene Sugarman**, author of the book 'Winning the Mental Way' observes that the body cannot distinguish between something that is really happening, and something that an individual visualizes. Hence, the mind can be used to :

- Recall past performances that were good and practise them in the mind.
- Correct technical errors committed previously
- Put oneself in various situations and visualize how to tackle the situation.

Mental practice, it has been found, is quite helpful. When you practice executing a skill in you head, it becomes a **conditioned response**. When a skill becomes a conditioned response, it comes to you instinctively when you are in the field.

The sport psychologist teaches the sportsperson how to use all her senses in imagery. First, the sportsperson is trained in **external imagery**, by showing videos of past events. The sportsperson is made to spot her errors and visualize the correct response in that condition. Then the sport psychologist trains her in internal imagery, by asking her to visualize certain situations and what her response would be to such situations.

3. The 4C

Concentration, Confidence, Control and Commitment are the 4C's that psychologists

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consider the main mental qualities important for successful performance in most sports.

Concentration is the mental ability to maintain focus. If the sportsperson is distracted, her energy can't be channelized in the right direction and hence reduced performance. Hence, psychologists train sportspersons in concentration. Different sports require different kind of concentration. Some require **sustained concentration** (e.g., cycling, tennis, squash), other require **short bursts of concentration** (e.g., cricket, shooting, golf) while still other games like sprinting and skiing require **intense concentration.**

The psychologist identifies what kind of concentration is needed in a particular sport. Then she identifies common distractions like anxiety, mistakes, negative thoughts, fatigue and weather. The sportsperson is then trained on controlling and handling these stressors.

Confidence is the result of a comparison that a sportsperson makes between her **ability** and **goal**. Self-confidence results when the individual thinks that she has the ability to achieve the goal. Under-confidence results when she thinks she can't do it. Over-confidence results when the individual is complacent and isn't putting the extra effort to win. While under-confidence and over-confidence are both harmful, self-confidence should be inculcated in the sportsperson. To improve self-confidence, the sports psychologists often use mental imagery to help the sportsperson visualize previous good performances, imagine various scenarios and how one could cope with them.

Control in the 4C refers to **emotional control.** Two emotions that the athlete feels tough to tackle are **anger** and **anxiety**. When a sportsperson becomes angry, the cause of anger often becomes the focus of attention. The concentration shifts from the task to the cause of anger and performance deteriorates. Due to decreased performance, confidence on self is reduced which leads to more anger! Anger becomes a vicious cycle which over-arouses the player and makes her lose her concentration.

Another such emotion that hampers concentration and confidence is anxiety. Anxity can be physical anxiety (sweating, nausea etc) of mental (worry, negative thoughts etc.) or both. To tackle anxiety, sports psychologists train the sportspersons in **relaxation**. For anger, certain anger management techniques are used. Self-instructional therapy is quite popular among sports psychologists as a means for anger management.

Commitment refers to how focussed and motivated the sportsperson is towards her ultimate goal. There are many hassles that a sportsperson has to face in day-to-day life. In the face of this, keeping up one's morale and commitment is a challenge. To enhance and sustain the sportsperson's commitment level, the psychologists usually use goal-setting techniques which will be discussed next.

4. Motivation

Motivation drives behaviour towards a goal. Here, the goal is to win the game and/or to excel in performance. Before discussing various techniques used by sports psychologists, let us understand first the nature of motivation of athletes. According to the **Achievement Goal Theory** of Dweck (1986), there are broadly two orientations of the individual playing a game : mastery orientation and ego orientation. In **mastery orientation**, the focus is on personnel : giving maximum effort to realize your full potential. Those with mastery orientation are instrinsically motivated. They don't compete

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with other but with themselves. They always strive to get their best from their potential. Ego orientation, on the other hand, implies that the athlete seeks to perform better than others. She compares herself with others when setting her target. In the **ego-approach style**, there is **competitive orientation**. One want to be better than others. In the **ego-avoidance style**, there is a fear of failure. One fears that she may be negatively evaluated by the audience if she doesn't perform upto the mark and this motivates her to perform.

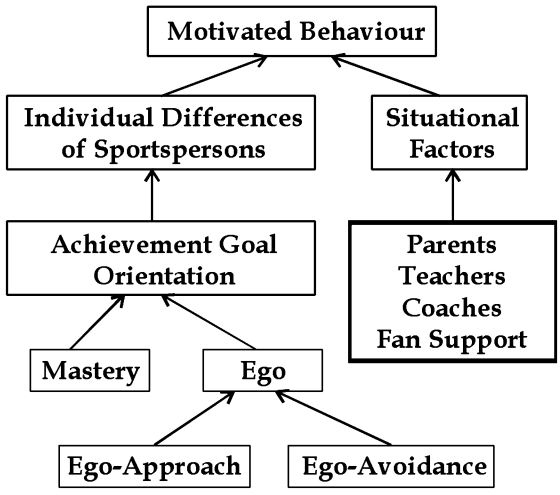

Fig : Basis of Achievement Goal theory

So which of these styles is the best ? Obviously, the **ego avoidance style** is not good. It leads to a fear of failure. When fear of failure motivates one to perform, she can't give her best. Rather, the sportsperson suffers from anxiety and lack of focus.

Mastery goals are better than ego-approach goals. This is because when one is motivated by mastery goals, she enjoys doing her work. This keeps up her motivation and commitment. She strives for mastery, without bothering for what others' performance is. In the ego-approach style, the goal is to be better than others, and stay there if you don't face any more challenges. You don't try to realize your full potential. Sports psychologists recommend that while training off-field, one must be motivated by mastery goals but once you are in the real game, you should be motivated by ego-approach goal. Ego-avoidance goals are dangerous and should be avoided.

Many psychologists have observed that **goal-setting** improves performance. The sports psychologist helps the sportsperson to set SMART goals. SMART stands for :

S – Specific

M – Measurable

A – Action-oriented

R – Realistic

T – Time-bound

The goal should be specific and realistic. It ought to be challenging, but not that challenging as to overwhelm the sports trainee. The goals should be measurable and continued feedback should be provided by the coach and sports psychologist. Often, **chaining and shaping** techniques are used to teach trainee sportspersons complex motor skills.

n Psychological Interventions in Team Sports

There are, broadly, two types of sports : **interactive** and **co-active**. In interactive sports like football and hockey, overall performance depends on interpersonal dynamics of the

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sportsmen. In co-active sports, like swimming and golf individual performance doesn't depend on others' performance. Cricket is a hybrid wherein the batsman's behaviour is coactive but the fielding team's behaviour is interactive. There are many psychological factors involved in interactive sports, and demand psychological interventions to enhance group performance. Some of these are :

1. Social loafing
2. Group cohesion
3. Co-ordination factors

Steiner (1972) observes that a good team is more than a group of skilled players. If members don't work together, in coordination, then :

Actual Productivity = Potential Productivity – Losses due to faulty group processes.

Social Loafing refers to a phenomenon wherein individual performance decreases when the individual finds herself in a group. According to **Woods** (1998), social loafing is essentially the result of decrease in motivation. This may happen due to reduction in sense of responsibility. Woods, therefore, believes that sports coaches and psychologists should monitor and give feedback on performance to each individual and to the group rather than only to the group.

Cohesion is the psychological process that transforms a collection of individuals into a group. Degree of cohesion, of course, varies from group to group. Technically, cohesion can be defined as the total field of forces which act on members to remain in a particular group. In sports, there are two major types of cohesion :

1. Task cohesion
2. Social cohesion

Task cohesion refers to the degree to which group members work together and are committed to achieve common goals, such as winning the match.

Social cohesion is the degree to which group members share personal rapport and goodwill with each other. Both forms of cohesion are important to build effective teams.

When dealing with the issue of cohesion, the sports psychologist first takes direct assessment, as given by the players, to determine the amount of cohesiveness in the team. Then she takes certain steps like :

- Conduct periodic team meetings
- Build mutual respect among members and try to remove any prejudice or misunderstanding among the members.
- Develop effective two-way communication between players.

Coordination factors refer to the degree to which each player's skills are meshed together with others' skills in the team. This has to be a central feature in sports training in interactive sports. Hence, training time should include practice in, for example, passing a football among players, timing and pattern of players' movements when scoring a goal or when taking a penalty corner (Gross, 2005).

n Rehabilitation of Injured Athletics

A major challenge for the sports psychologist is to rehabilitate injured athletes. It has been found that injured athletes commonly experience tension, depression, anger and other forms of

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emotional distress (Leddy et al., 1994). Hence, a lot of research is now being done on the rehabilitation of injured athletes.

Many models have been established to explain psychological responses to sport injury. Initially, stage models were very popular. According to Kiibler-Ross's (1969) stage model, injured athletes with terminal illness go through five stages :

1. Denial
2. Anger
3. Bargaining
4. Depression
5. Acceptance

Another stage model, presented by Hardy (1990), states that emotional reaction after injury has two phases :

1. A reactive phase
2. An adaptive phase

The reactive phase includes shock and negative emotions such as depression, anger and denial. The adaptive phase includes positive emotions such as confidence and hope.

A major shortcoming of stage models was that they failed to account for individual differences in response to athletic injury. Hence, many researchers started building models based on cognitive appraisal of injury. According to one such model (proposed by Brewer, 1994), injured athletes' personal factors and situational factors influence their responses to injury.

Psychological interventions in the case of injured sportspersons are varied and various techniques are suitable for various conditions. Some techniques have been found to be effective are :

- **Counselling,** which includes active listening, exploring coping strategies and challenging negative beliefs etc.
- **Cognitive interventions,** including positive self-thought, rational reasoning etc.
- **Cognitive-behavioural interventions,** such as self-monitoring of distress, self-talk to manage pain and anxiety etc.
- **Relaxation therapy,** including stress reduction training yoga and meditation (Naoi and Ostrow, 2008).

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7

Military Psychology

n Mental Health of Soldiers

One major job of military psychologists is to promote psychological well-being among the soldiers and other employees in the military. This is increasingly becoming a challenge given that cases of suicide, fractricidal murder and depression are on the rise. Also, the job description of the military has broadened owing to the fact that they are asked to do any kind of job, including building bridges after Tsunami and keeping peace when riots erupt. Their job description today isn't restricted to just protecting the border.

The **military environment** is 'characterized by jobs with high stress, low autonomy, little personal control over workplace, long working hours, and/or deployment in combat-related or in internal security duties in insurging corrected areas that entails chronic exposure to potentially traumatic events' (Sharma & Sharma, 2008).

The psychological effects of such stressors are multi-dimensional. The role of military psychologist here is to recognize the psychological vital signs in military domain, using various psychological assessment tools; design and implement various intervention programmes; provide counselling to soldiers who are in need of it; and to rehabilitate retired and handicapped soldiers who usually show strong signs of depression and anxiety.

Mental Health Problems

The effect of stress depends on two factors : the environment and the person. Environmental stresses are, no doubt, intense, unpredictable, chronic and uncontrollable for military personnel. But **individual vulnerability** to stressors also determines who gets mental health problems and who doesn't. Qualities like **resilience** and **military hardiness** in individuals help them to better cope with stress.

But once stress affects an individual's well-being, how does it get manifested ? Sagar Sharma and Monica Sharma (2008) argue that there are three stress-induced vital signs critical to an individual's well-being. These are :

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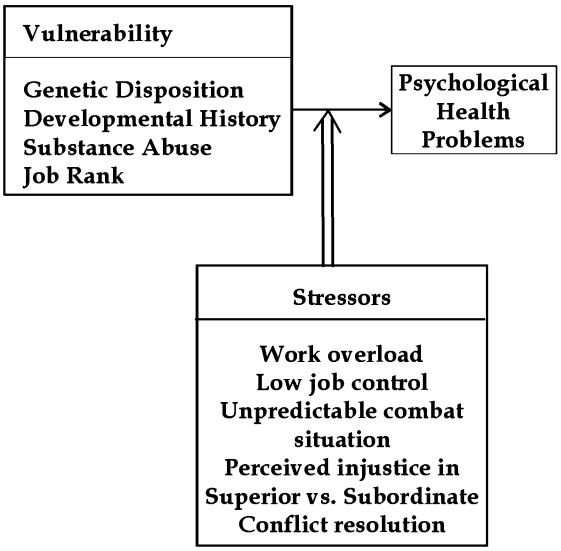

Fig. : Factors affecting psychological health in military

1. Anxiety
2. Anger
3. Depression

Individuals high on these key indicators suffer from many mental health problems like Generalized Anxiety Disorder (GAD), Panic Disorders, Post Traumatic Stress Disorder (PTSD) and Depression.

Military personnel are more vulnerable to anxiety related disorders than civilians owing to the greater probability of encountering traumatic and life-threatening events. Military personnel are the most vulnerable to PTSD. Anxiety and depression, in general, lead to impaired quality of life and put immense psychological burden on those affected.

Anger is another vital sign that is of concern to the psychologist. When an individual directs his anger towards himself, he may try to commit suicide. When he directs his anger towards persons perceived by him as unfair and unjust, it may lead to violence and fratricidal murder. The number of cases of suicide and fratricidal murder (killing one's collegue or superior) in the army is on the rise. A major reason for this is intense anger, coupled with anxiety and depression.

Assessment

Now that we know that anxiety, anger and depression are three symptoms of underlying psychological ill-health, the next job is to **assess** and **monitor** these signs in soldiers. Sagar Sharma and Monica Sharma (2008) argue that the way physicians routinely measure pulse rate, blood pressure and body temperature, the same way military psychologists should measure anxiety, anger and depression in soldiers regularly. Hence, their emphasis is more on early detection so that remedial counselling and intervention strategies can be used to mitigate the mental problems.

The most widely used psychological tests to assess and monitor these three vital signs are :

1. State – Trait Anxiety Inventory (STAI)
2. State – Trait Anger Expression Inventory (STAXI)
3. State – Trait Depression Scale (STDS)

The STAI measures State Anxiety (S-Anxiety) and Trait-Anxiety (T-Anxiety). T-Anxiety refers to 'relatively stable individual differences between people in the tendency to perceive stressful situations as more or less dangerous or threatening' while S-Anxiety refers to 'Psychophysiological emotional state that consists of subjective feelings of tension, apprehension, nervousness and worry, and activation (arousal) of the autonomic nervous system' (Sharma & Sharma, 2008).

To put it simply, T-Anxiety measures to what extent an individual is generally anxious. S-Anxiety on the other hand, measures the level of anxiety at the present time.

In responding to the S-Anxiety items, subjects respond to how they feel at the very moment the

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test is conducted. T-Anxiety items check to what extent the subject is generally anxious. A representative sample is (Sagar & Sagar, 2008) :

S-Anxiety present	:	I feel tense; I am worried
S-Anxiety absent	:	I feel relaxed; I feel secure
T-Anxiety present	:	I worry too much over something that doesn't matter; I feel nervous and restless.
T-Anxiety absent	:	I am content; I am pleased.

The **State-Trait Anger Expression Inventory** (STAXI) measures state-anger (S-Anger) and trait-anger (T-Anger). S-Anger is an **emotional state** marked by subjective feelings of anger, varying in intensity from mild annoyance to intense fury. T-Anger refers to individual difference in the disposition to experience anger. You must have observed that some people in your college are quite short-tempered, while others are as cool as ice, even when provoked. This difference in disposition is measured by T-Anger.

In the S-Anger scale, items are like the one given below.

"How do you feel now ?"

(a) I feel angry

(b) I am furious

(c) I feel irritated

(d) I am cool

On the other hand, the items of T-Anger are like.

"How frequently do you feel angry ?"

(a) Almost never

(b) Sometimes

(c) Often

(d) Almost always

Similarly, the **State-Trait Depression Scale** (STDS) measures predisposition to depression (trait-depression or T-Dep) and actual depression at the moment (State-depression or S-Dep). A representative Sample has been provided by Sharma & Sharma (2008) :

S-Dep present	:	feel miserable, sad, gloomy
S-Dep absent	:	feel safe, enthusiastic, peaceful
T-Dep present	:	feeling low and hopeless
T-Dep absent	:	Generally feeling strong, hopeful about future.

These three inventories (STAI, STAXI and STDS) have been found to have good reliability in assessing and monitoring the prevalence of anger, anxiety and depression in the military. Following Spielberger and Sharma (1976), the cross-cultural adaptations of these tests have been done by many scholars. Many translated versions of these tests are now used in various countries.

Intervention

What should be the approach to treat those who are assessed high on anger, anxiety and depression on the various scales discussed above ? You may state that counselling is a possible route, or psychotherapy. However, Sagar Sharma and Monica Sharma reason that working with people on an individual basis should be an exemption. This approach carries the risk of stigmatization. Hence, they have suggested some other measures :

- **Post-trauma rehabilitation** : Once a soldier is assessed to have PTSD or any other anxiety disorder or depression, he should be removed from combat duty and put in 'rest and recoup' camps. They should be put at good physical comfort and their families should join them in these non-conflict transfer assignments.
- **Trauma Event Management** (TEM) : TEM is an alternative to complete medicalization and hospitalization. Here, a team of trained

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medical officers and behavioural health professionals provide therapeutic and medical assistance.

- **Buddy debriefing** : It has been found that **talk** is the best and most effective remedy of trauma. Psychologists recommend talking to peers about the traumatic event as an effective way of dealing with trauma.
- **Self-care strategies** : The concept behind self-care is to empower soldiers to themselves cope with stressors and emotional distress. Usually, a team of professionals prepare a self-care guide for mental health in simple language and includes guidance regarding relaxation exercises, yoga, meditation, healthy lifestyles and social networking etc.

Besides above direct intervention strategies, military psychologists also recommend certain preventive intervention strategies. These strategies often aim at reducing the stressors that soldiers experience. Hence, these strategies investigate the sources of stressors that could be handled by intervention and better organizational practices : Some of the strategies recommended by Sharma & Sharma (2008) are :

- Military training must include more psychological training programme, like **hardiness training**.
- Mental problems are the result of person-environment misfit. One strategy is to restructure the organizational work environment.

  Military Command and the Specialists can sit together to discuss about various ways in which to restructure the rigid, disciplinary hierarchy of the military to better meet the demands of soldiers and officers.
- A job in defence is a job with low job control and high job demand. By Karasek's Model (see the section on stress), this itself creates high stress. The **leadership style** of officers in the military is predominantly autocratic with low freedom for subordinates. A clear set of guidelines must be given to officers regarding how they could deal with their subordinates; deterrents and sanctions must be aimed at officers who seek to harass cadets.
- Finally, certain measures like a *feedback* system, a prompt *grievance redressal* system, team building, fair *conflict resolution*, clear and accessible *communication channels*, enforcement of a *buddy system* in each battalion or company, and sound *performance appraisal* system etc. help in stress reduction in the military.

n Psychological tests in Military

The job profile of defence personnel is substantially different from that of normal jobs. These are high-risk jobs making substantial demand on the physiological and psychological resources of the personnel. Hence, an important preoccupation of psychologists in defence is to evaluate the psychological fitness of present and prospective defence personnel. Psychologists device psychological tests for use in selection, training and counselling. Also, tests are devised to be used in recruitment to specialized operations such as Border Security Force (BSF), Black Cat Commandoes, Special Protection Force, Submarine staff and even in policing in Jammu and Kashmir and in states of the North-East.

The job of defence personnel today is so vast and diversified that specialized tests have to be designed to select personnel for specific tasks. Let us now study in greater detail how psychological tests are devised and used in military.

• Selection

Psychological tests are used in the recruitment of soldiers and officers, as well as in selection of soldiers for special-purpose missions. All these have different criteria for selection; and the psychological attributes

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demanded of a candidate vary. Yet, there are certain basic psychological attributes that are desired of all personnel.

In the recruitment process, there are two stages (Swedfeld and Steel, 2000) :

1. Screening-out and
2. Screening - in

In the screening-out stage, the central concern is the assessment of psychological and emotional stability. Is the cadidate free from psychopathology ? Even if he is, what are the chances that he will develop these is future ? What is his vulnerability for various mental problems ? The screening-out stage can effectively make use of standard psychological tools such as MMPI-2, pencil and paper test and intelligence tests. This stage's main purpose is to decrease the risk of "false alarm" (i.e. decrease the risk of selecting a candidate with psychological vulnerability that would make him unsuitable for the job).

For the screening-in stage, specialized tests are designed. In India, these tests are developed by Defence Institute of Psychological Research (DIPR). The design follows the following steps :

1. Job Analysis
2. Criteria Selection
3. Instrument Selection

The job analysis varies when selection is for specialized posts. But for simple recruitment at entry level, there are certain common features of the job. A military job is one 'with high stress, low autonomy, little personal control over workplace, long working hours, and/or deployment in combat-related or in internal security duties in insurgency wrecked areas that entail chronic exposure to potentially traumatizing events' (Sharma & Sharma, 2008).

After job analysis, the next task is to design a selection criteria. On what criteria should candidates be selected ? Put in another way, what are the attributes that a prospective soldier should have ? A group of psychologists in U.S.A. have examined a wide array of attributes and identified 30 individual attributes that predict effective on-the-job performance of soldiers in U.S. Army Special Forces. These can be broadly grouped into four categories :

1. **Cognitive attributes** include judgement and decision making, planning, adaptability, creativity and specific cognitive skills, such as auditory, mechanical, spatial, math and perceptual speed and accuracy.
2. **Communication attributes** include reading and writing ability, language ability and verbal and non-verbal communication abilities.
3. **Interpersonal, Motivational and Character Attributes** include diplomacy, cultural adaptibility, maturity or emotional stability, autonomy, team playership, dependability, initiative, perseverance, moral courage, motivating others, and supervising.
4. **Physical attributes** include swimming, flexibility and balance, strength and endurance.

(Kilcullum et al., 1999).

The next step is selection of an instrument or a range of instruments to measure candidates for these criteria. Sometimes new tests are designed, while at other times standard tests can be used. For instance, McDonald et al. (1990) had studied US Naval Special Force using a standard test that measures the five traits of the Big Five Personality Factors. They found that successful candidates are more sociable (i.e. high on extraversion), emotionally stable, likeable (i.e. high on Agreeableness) than unsuccessful candidates. Hence, standard tests

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also can be used to assess certain criteria.

For selection into high-risk and specialized work groups, specific psychological tests are needed. For example, the Special Protection Force (SPF) is a group that provides security to Very Important Persons (VIPs) including the President of India, the Prime Minister and former Prime Ministers and their family. In this task, high amount of attentional resources and vigilance is required. The members of SPF need to have exceptional vigilance, more than that in normal defence jobs. This is because a single miss of stimuli can lead to loss of life of a VIP. The commandos who are assigned this job are tested on this attribute. Concepts of Signal Detection Theory (SDT), psychophysics and ROC-curves are used to design tests to select personnel for such specialized tasks.

• Training

Psychological tests are used in training of cadets also. Usually these are ability tests and achievement tests. In a typical training programme, a test is conducted before the training begins (Pre-test) and another after the completion of training (Post-test). The difference between the two test results show the skill improvement of the soldier. This becomes very important in defence because the equipments are very costly to operate. Hence, cadets are trained on simulators or in inferior-quality equipments. Tests help assess the *transfer of training* that is supposed to happen between training and real conditions. There are also other utilities of tests in training :

1. If the difference between **pre-test** and **post-test** is low generally for soldiers, it may mean that the training programme need to be updated.
2. The effectiveness of simulation games and virtual reality in improving various cognitive skills for real-life situations can be assessed.
3. Sometimes, training simulates real-life combat conditions. Tests help assess the psychological response of soldiers in such conditions.

• Counselling

The defence personnel face high-stress and hence are especially vulnerable to various mental problems like PTSD, personality disorders, depression etc. (discussed earlier in detail). The challenge to the defence psychologist is to detect the incidence of these disorders and provide immediate counselling before the condition aggravates. The need for counselling among personnel is assessed by a variety of inventories, some of which are discussed in an earlier section in this chapter.

n Human factor Engineering in Defence

Many complicated machines are used in defence. There are hi-tech tanks, planes, fighter planes, radars, submarines etc. These machines have very high degree of sophistication and are **supposed to perform** critical tasks. However, these machines aren't autonomous. They are operated by human operators. Hence, the machines aren't supposed to perform, but the human-machine system needs to be optimized. We need to understand that human cognitive and motor abilities have limitations. The best man-machine system is one where human factors are considered before designing the machine.

Human factor Engineering is a branch of study that seeks to establish a man-machine fit

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by including the constraints of human factors when engineering the machine (i.e. when designing). The need for human factor engineering (HFE) in defence arose for the first time during World War 2. Prior to the war, many sophisticated machines were developed by engineers; these engineers lacked any knowledge of how human factor (cognitive response, emotional response, perceptual skills etc.) vary in combat situation. Hence, they didn't consider these factors in designing machines. As a result, many accidents occurred during World War 2. During the war, a pilot was required to take split-second readings of instruments, make rapid decisions and then react fast to control the machine. In deed, the engineers never cared to measure the operator's reaction time. They did not understand that the operator was a human and there were limits on his/her cognitive and motor abilities.

Some of the basic principles of HFE have been discussed under 'Ergonomics' in the chapter on Organizational Psychology. However, the challenges of HFE in defence are different from that of normal organizational or work settings. Some of these challenges are :-

1. H.F. Engineer has to take special care of combat environment. The human response (emotional and psychological) in real combat situation is different from that in normal situations. For instance, it may be very comfortable to use a complex gun. But how does a **man-rifle system** perform in the tension of combat ? How do psychological and physiological changes in the soldier affect the performance ? Is the rifle well-designed to accommodate such changes in the man ? If a rifle needs lot of force to pull the trigger, it may be tough to use the rifle in face-to-face action at the border ?
2. Modern **military equipments** are very complex and costly. Inappropriate man-machine integration could lead to death. Even small errors could be fatal. Also, in modern warfare, the scope of errors should be low as the enemy machines are pretty hitech and operator friendly! Hence, the H.F. Engineer has to walk a tight rope.
3. **Conducting research** and getting data for HFE is tougher in case of military than otherwise. Usually, these data are considered confidential; hence countries don't share their research findings. Researchers at Defence Institute of Psychological Research (DIFR) are "Indian" researchers and prefer not to share their findings with other countries. Same is the case with other countries. Secondly, the research to be conducted to know various cognitive and motor responses to a specific design can't be approved in the design of another machine. The data collected are very specific data.

While the challenges are more, the advantages of HFE in defence are great many.

Some of these are that HFE

1. Makes equipments easier to operate.
2. Increases reliability and reduces errors.
3. Reduces possibility of accidents.
4. Reduces amount of training required.
5. Reduces the stress on operators and contributes to their well-being.
6. Reduces the number of personnel to do the job; also, those with lower aptitude could be employed to operate machines.

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Psychology Applied to Socio-Economic Problems

8. Application of Psychology to disadvantaged groups
9. Psychological problems of social integration
10. Psychology of terrorism
11. Psychology of Gender
12. Application of Psychology to Environment and Related fields

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8

Application of Psychology to Disadvantaged Groups

- The Concept
- Relative and Absolute Deprivation
- Prolonged Deprivation
- Consequences of disadvantages and deprivation : Social, Physical, Cultural and Economic
- Educating and motivating the disadvantaged towards development

n Disadvantage and Deprivation

A (wo)man is the product of his (her) 'nature' and 'nurture'. The nature-nurture controversy – on the extent of influence of each in a (wo)man's development – is a continuing one in psychological literature. Yet, all agree that :

Genes × Environment = Human Development

Genes usually set the the 'limit' to development. Environment determines the **actual development** within this limit. For example, try as much as he does, a dog cannot fly. No amount of practise or rich environmental stimulus can make a dog fly because flying is not genetically encoded in its genes. Yet, environment determines a large part of development, i.e. a **deprived environment** can lead to non-optimal development.

The resources at the disposal of human society are **limited**, but the number of individuals and their **needs** are not. Some are placed at an **advantage** to appropriate the resources; others less fortunate, are at a **disadvantage**. Disadvantage leads to deprivation.

The disadvantaged need not always be deprived of all resources. A daughter of a conservative, rich man is disadvantaged in education if her father doesn't let her study. She is **relatively deprived** with respect to her brother. Yet, she is not absolutely deprived.

Hence, **disadvantage** is the result of unequal access to resources – physical, cultural and educational among others. **Deprivation** is a condition or a state of being that the diadvantaged faces.

n Relative & Absolute deprivation

Relative deprivation is a subjective concept; it implies that an individual or a group perceives himself (themselves) relatively deprived in relation to another individual (group).

It was political scientists like **Runcimann** and Gurr who found that when we perceive a deprived state, we don't perceive objective deprivation. Rather, it is our **expectations** that we use as an indicator. Egoistic relative deprivation is that felt by an individual, fraternalistic relative deprivation is felt by a group with respect to another.

Absolute deprivation, on the other hand, is an objective construct. As a result of

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disadvantage, if an individual, a family or a group is bereft of basic necessities for healthy living – food, rich natural surrounding, proper housing, nutrition, health facilities etc – the resultant deprivation is absolute deprivation. The differences between relative deprivation and absolute deprivation are :–

1. Former is *subjective experience* while later is an *objective condition.*
2. Absolute deprivation is the result of disadvantage. The same may or may not be the case with relative deprivation. A Hindu group may be relatively deprived if reservations for Muslims are introduced; while in fact according to Sachhar Commission the muslim community as a whole is at a disadvantage (is facing social exclusion) and hence is absolutely deprived of jobs and modern education.
3. Logical consequences of the two are vastly different. Relative deprivation leads to prejudices and in extreme cases conflict and violence. Absolute deprivation leads to conditions discussed in this chapter.
4. Relative deprivation may or may not be the fallout of absolute deprivation. For example, factory workers don't feel relatively deprived of managers because they believe that managers deserve the pay they get on the basis of merit. Yet, many workers feel relatively deprived, form unions or resort to working class militantism. Relative deprivation, its occurrence and its prevalence is a much more complex phenomena, than absolute deprivation which can be gauged by objective economic criteria.

n Prolonged Deprivation

Prolonged deprivation refers to absolute deprivation for a prolonged period of time. It may refer to absolute deprivation of nutrition, of health support, a rich and stimulating environment or deprivation of parental support or many of these factors working together. Prolonged deprivation is a significant concept in psychology because prolonged deprivation in childhood can lead to numerous psychological impairments. The way prolonged deprivation of vitamins - C can lead to Scurvy, or that of vitamin - K can lead to Kwashiorkar (which is common in children from poor families), the same way prolonged deprivation of stimuli can lead to psychological consequences.

Development = Environment × Genes

Many studies have shown the effect of prolonged deprivation of a rich environment on the development of an individual. For instance, Blackmore and Cooper (1970) conducted an experiment in which some kittens were exposed to only stimuli that leads to perception of horizontal objects; and some other kittens were exposed to stimuli that leads to perception of vertical objects only. After sometime, they found that the kittens who were exposed only to horizontal images couldn't detect vertical edges and vice versa. This experiment demonstrates that perception is plastic.

In a way, not just perception but the whole brain is plastic. The human infant has a very small brain in comparison to other animals. This is because otherwise the infant brain couldn't fit into the mother's womb. Even though the infant's brain is small, it has nearly all the neurons that an adult brain has. It only doesn't have the neural connections i.e. links between various neurons. As the child actively experiences the world, various stimulations cause links to develop in neurons related to those stimulations. For example, there are some

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neural calls in the brain that specifically work in mathematical problems solving. If the child does many rich mathematical problems, the connections of these cells become stronger. On the other hand, if the child is **deprived** of a stimulating environment, connections don't develop and the brain's functionality related to these cells is low. This plasticity of the brain is not life long. After some years, the brain becomes rigid and even a rich environment can't help develop these skills. **Prolonged deprivation** leads to such an effect.

Take the case of **Genie.** Genie was deprived of language skills, among other stimuli, for 11 years before she was discovered. She could never learn proper language because her brain had ceased to be plastic. Now, compare yourself with a child from a *slum*. It is evident that the child has lived in a deprived environment for a long time while in your case you have been fed with a golden spoon. At every stage of cognitive development, you have had teachers and parents to provide you with a rich, stimulating environment. When this wasn't sufficient, you joined some coaching classes to further hone your mathematics skills. No wonder, the part of the brain related to mathematical skills, for instance, is well-developed in you. But what about the slum kid who didn't even get a pollution-free environment ?

Prolonged deprivation and its effects – cognitive, perceptual, intelligence-related, motivational and personality-related – are the focus of psychological studies that are discussed in this chapter.

n Disadvantage and Deprivation : in perspective

If a student from Dalit background (erstwhile untouchables who still have to do menial jobs and stay at the bottom of social hierarchy) is unable to compete with the son of a middle-class individual, in competitive exams like IAS and IIT Jee, is it because he has inferior ability or because of some disadvantage ? His low performance is due to a combination of disadvantage and deprivation. The fact that he can't get proper guidance or can't afford coaching puts him at a disadvantage. Even the fact that his peers discourages him to prepare for IIT JEE ("You can't make it. Rather than, wasting time, join my Mechanic Shop!") is a disadvantage for him.

Secondly, his birth and upbringing has been mostly in deprived environments (slums in cities and shanty settlements away from the village in rural areas.

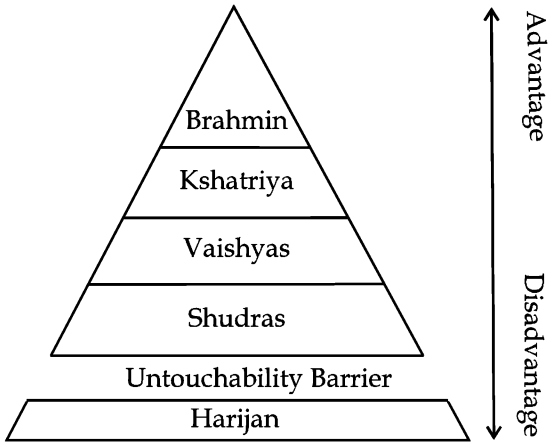

Fig : Social Hierarchy of India and related disadvantage

He hasn't been exposed to rich environments (pre-school education, healthy play life, nutritious food, training in intelligence behavior etc) during **"critical period"** of his growth. This impairs his cognitive faculties and puts limits on optimal development of abilities. Many-a-

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times, slum children are exposed to child sexual abuse, violence and drugs at an early stage. Their language development is slow and stunted. No doubt, the slum kid can't compete with others in competitive exams. So, my friend, if you have got admission into an IIT or AIIMS or any other prestigious institute, it is **not** because you deserve it; rather because your are **lucky** to be born in an affluent family and lucky to be treated well by your parents (Genie was born in an affluent family, yet was deprived of basic stimulants till she was 13 because of a mentally sick father !).

Now the question is, **why intervention ?** Intervention is needed to teach the deprived group children because they are part of the **human resource** of the country. Their deprivation and disadvantage is not only harmful to them, but also to the nation : it can't harness the best potential in its citizens ! The issue has become even more pressing with 11th Planning Commission emphasizing that India's huge population is an asset – a *demographic divident*. But if these students are not taught and motivated to achieve, the demographic divident will turn into "demographic disaster" and increase ratio of dependants (including those youth with high dependence motivation) to that of working population.

n Deprivation : Nature or Nurture

A major issue that psychologists have looked into is whether deprivation is due to **deficiency** in environment or **difference** between the deprived groups and non-deprived groups. The **deficit argument** is a nurture argument that states that, for instance, scheduled castes have deficient environmental stimuli; hence shows lower performance and are at the bottom of hierarchy. The difference argument states that the classes at the top and bottom of the hierarchy are genetically different in abilities.

To put it in very simple terms, human development is a product of environment and person.

∴ Human Development = Environment × Person.

If a class of citizens is at the bottom of the hierarchy, it may be because of genetic factors (different abilities) or because those at the bottom have deficient environment due to which they stay at the bottom.

For example, Prof. J. P. Das and his colleagues (1970) have found that the performance of poor Harizan students in intelligence tests was lower than that of rich Brahmin students. A value-biased observer may argue that Brahmins are genetically more intelligent than Harijans. She may support her argument by stating that since castes practice endogamy in marriage and inter-caste marriages are forbidden, the genetic pool of Brahmins is different from that of Harijans. This argument is similar to the arguments made in the west in relation to race : that white have better intelligence than blacks.

The white-black 'difference' has today been largely discredited in scholarly circles. Same is with the genetic hypothesis of caste. Many studies have proved that Harijan children brought up in advantaged situations perform as good as Brahmin children. G. Misra and B. Tripathi (1980), for instance, found that high and low caste groups with similar experiential background (i.e. similar environments) demonstrated almost similar levels of performance on cognitive and intellectual tasks. Om Prakash (1982) compared scores on Raven's Progressive Matrices for different caste groups and found that low caste children of literate parents actually scored higher than the children of high caste literate parents.

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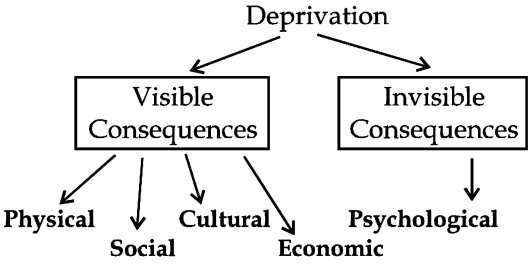
Hence, it can be said that **difference in experiential background,** rather than genetic difference, leads to deprivational effect. Even here, there are some anomalies. You must have heard that diamonds are found in coal mine; that lily breeds in polluted water. These phrases mean that certain individuals from deprived groups rise and perform exceptionally good. If nature doesn't matter and only 'nurture' (i.e. experiential background) matters, how can we explain this phenomena ? How can one individual who has been deprived of environmental stimulation at an early age rise so high and no other can get out of the vicious circle ?

To explain this phenomenon, **Prof. J. P. Das** (1973) has proposed a **modified threshold hypothesis.** This hypothesis states that if we recognize a threshold for intellectual ability, children above this threshold are hardly affected by disadvantageous conditions; children below this threshold are, however, strongly affected. This hypothesis reconciles nature with nurture. It basically states that ability and deprivation interact and jointly influence performance.

n Consequences of Disadvantage & Deprivation

Any society can be visualized as a system with various sub-systemic elements inter-linked. Disadvantage and deprivation create a situation in which various physical, social, cultural, economic and psychological dimensions are affected. Further, these systems affect each other also.

There are two types of consequences of deprivation : **visible** and **invisible**. Visible consequences include physical, social, cultural and economic consequences; invisible consequences include psychological consequences. Visible consequences are visible, but cannot be explain without understanding invisible consequences. This is because all sub-system interact dynamically. Invisible consequences are **causes** for visible consequences as well as **effect** of visible consequences.



Hence, various, physical, social, cultural and economic consequences can be studied best by psychologists. Visible consequences and psychological variables of deprived groups have figure - ground relation i.e. these consequences stand on psychological variables.

Various visible consequences of disadvantage and deprivation can be dealt under the following headings :

1. Physical and mental health
2. Socio-cultural consequences
3. Social Mobility issues
4. Economic consequences

1. Physical and mental health

Disadvantage leads to deprivation from good quality and appropriate quantity of nutritional intake. This leads to **malnutrition**. Malnutrition leads to stunted growth and also other consequences. Malnutrition adversely affects **cognitive functioning** and basic cognitive processes, and increases the chances of poor health (Misra & Mohanty, 2000).

Many studies have shown that nutritional intake is a function of Socio-Economic status

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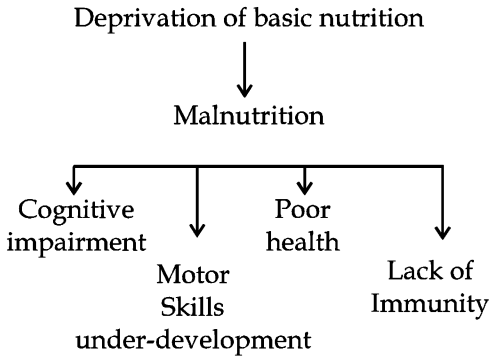
(SES), and malnutrition results in cognitive and health impairment. For example, Gupta et al. (1985) have reported lower growth standard for **Slum Children**. Dutta Banik (1982) has found from a longitudinal study of children's growth from birth to 14 years of age that height and weight measures are related to SES. Also, nutritional status is positively correlated with general development of **cognitive** and **motor functions**. For instance, Agarwal et al. (1987) have found from a large scale study on 6-8 year old rural children in Varanasi that severity of malnutrition is proportional to impairment of intelligence, verbal reasoning, short term memory, perceptual and spatial skills, fine motor coordination and schlosatic achievement. This mechanism can be represented as :



Apart from physical health, deprivation also impairs **mental health**. Prof. Giriswar Misra and Prof. Ajit K. Mohanty (2000) reason that incidence of psychiatric disorders among the poor and the disadvantaged groups is much higher than advantaged groups. Mental health problems are much more frequent among lower social classes in the class hierarchy. This is perhaps because "the experience of growing up in different social classes are related to individual differences in coping styles, stress tolerance and access to supportive social relationship. Experiences in lower social class lead to low self-esteem, intellectual rigidity, sense of fatalism and greater susceptibility to stress" which increase the vulnerability of mental health problems (ibid, p. 125). As per the **Stress-vulnerability model** of mental health,

Psychopathology = Stress × Vulnerability

Vulnerability is high because of intellectual rigidity, sense of fatalism and incorrect stress-coping style. **Stress** is high because social support is low, environmental stresses are high (for example, water and air pollution are high in slums; crowding is high, due to which personal space is low) and stress is chronic. The nature of **functional adaptation** to socio-cultural change also affects rate of psychopathology. For instance, Sharma and his colleagues (Sharma, Michael, Reddy and Gehlot, 1985) found that psychiatric morbidity among slum dwellers of Jaipur was higher for distant migrants than for those who migrated from nearby. Evidently, adaptation stress was higher for distant migrants. In another study (Misra et al., 1996) the health status of two tribes from the Chotanagpur plateau were studies :

1. Birhors, a nomadic tribe
2. Oraons, a sedentary tribe

It was found that Birhors had greater physical, psychological and psycho-physiological problems than Oraons. Birhors are nomadics and hence have to adapt to changing conditions often. Hence, functional adaptation is a mediating factor between low SES and Mental health problems.

Greater *emotional disturbance* and *neurotic traits of restlessness* have been observed among children from lower SES. Bhatia and his colleagues (1989) had conducted a survey in which they found that nail-biting was prevalent

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in a relativey younger age (2-5 years) among high SES children than among lower SES children. Nail-biting is prevalent among lower SES children even at the age of 9-12 years.

2. Socio-Cultural Consequences

The social norms, values, social climate and the built environment of a slum is not the same as that of a middle-class residential area. This is because disadvantage and deprivation lead to a fatalistic attitude and high need for dependence. Owing to this, the need for achievement is low and hence social mobility is low. Without social mobility, members of a low SES group cannot get better pay and standard of living.

This reinforces the conditions of disadvantage. For example, if a dalit labourer's son studies hard and becomes an IAS officer, he can rise above the conditions of disadvantage. However, if by socialization he internalizes the belief that he can **not** become an IAS officer, his expectancy is low and hence he doesn't study.

In one study, **Saraswati** and **Dutta** (1990) analyzed the children and adolescent girls growing up in rural poverty and urban slums. They found that children are socialized to non-competitive coping styles, *narrow goals*, and *acceptance of destiny*.

As a result of above vicious circle, a **culture of poverty** develops. Frustration due to perpetual low SES condition makes many youths deviant. These youths form peer groups with **delinquent sub-cultures**. **A. K. Tandon** and his associates (1978) have tried to classify deliquents into aggressive and non-aggressive deliquents. They found that aggressive delinquents came from low income families, experienced parental deprivation and showed greater hostility as compared to non-aggressive group. **K. S. Shukla** (1977) has observed that a large number of juvenile delinquents are slum dwellers. These came from families with low parental income and impersonal interpersonal relation among family members. **Shukla** concludes that these delinquents are insecure in the family and this loss of status is compensated by achieving a status in a **delinquent sub-culture**. In these delinquent sub-cultures, the norms are different from (often antagonistic from) the norms of mainstream society. An individual member is appreciated for pick-pocketing or snatching, and respected in the group.

On an individual level, this culture of poverty affects children's **personality** also. Mohan and her colleagues (1990) have found that deprived children are *high on neuroticism* and *low on extraversion*. Disadvantage has also been causally related to *alienation*, withdrawal, autism and other *antisocial and anti-psychotic traits* (Helode and Kapai, 1986). Such personality traits reinforce the culture of poverty and are resistant to change.

Above dynamics can be represented as under :-

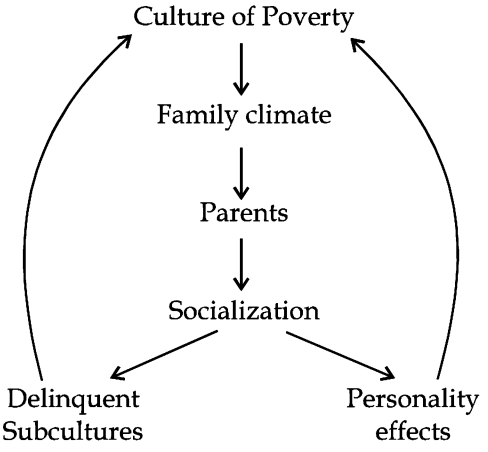

Fig : Dynamics of socio-cultural consequences of deprivation

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3. Social Mobility

Social Mobility refers to the movement of individuals and groups between different positions in a system of social stratification. In the present context, my concern is : how many individuals from low SES achieve higher income and higher social status in a generation ? Not many, Why ? It is known that inspite of a culture of poverty, equal access to **education** can lead to social mobility. Education is the most potent tool of mobility. So much so that some believe universal education will lead to an egalitarian society. However, the link between education and social mobility is not direct. It is mediated by three factors :

1. Cognitive development of the child
2. Academic achievement
3. Linguistic skills

The Psychological contention is that even if equal opportunities are available for education (including similar quality of education, similar school infrastructure etc.) students from lower SES are at a disadvantage.

Many studies have proved that lower SES students have impaired cognitive development. Prof. J. P. Das and his colleagues (1970) compared the performance of Harijan and Brahmin children on certain intelligence tests and found that poor Harijan children had lower scores. Differences in **perceptual skills**, such as **depth perception** and **perceptual differentiation** between deprived and non-deprived groups have been observed (J. P. Das and Sinha, 1975). Why is this so ? Deprived groups have lower cognitive development because cognitive processes are experientially shaped and, therefore, lower stimulation in a child's **experiential world** would interfere with her cognitive development. In fact, it has been found that (Misra & Tripathi, 1980)

$$CC \propto \frac{1}{D}$$

i.e., Cognitive Competence (CC) is inversely proportional to degree of deprivation.

Second factor influencing social mobility is **academic achievement.** It has been found that disadvantaged students prefer *dependent* and *non-participatory learning style* while advantaged students prefer independent and participatory learning style (B.P. Verma and Sheikh, 1992). Besides learning styles, poor school achievement of deprived students is also related to *cognitive readiness, home environment* and *social climate*. Hence, Misra and Mohanty observe that "poor or slow cognitive development affects general task performance as well as academic achievement and motivation which are associated with prospects of **economic and social mobility".**

Another area of concern is linguistic skills of the disadvantaged. I have studied in an English medium school right from childhood. Hence, I had a mastery in the language. Now, take the hypothetical case of Hari, a student from a Bhubaneswar slum. He talks in Oriya in his house; and goes to an Oriya school. After schooling, when he joins graduation, he finds that there is an absolute hegemony of English. A. K. Mohanty and M. Mohanty (1985) have seen that the duality of official language (english) and home language (oriya) leads to linguistic handicaps for low social classes. Other studies have found similar results from other linguistic regions.

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Above dynamics can be represented as :

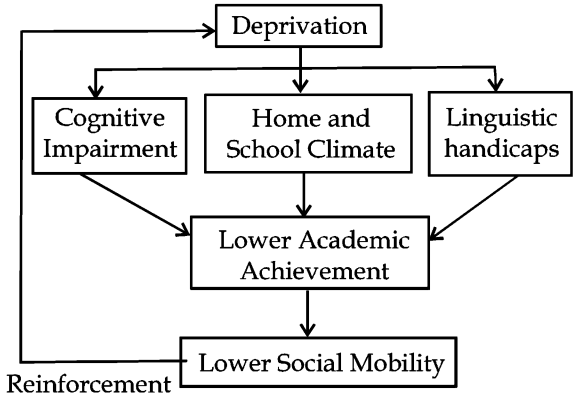


Fig : Social Deprivation and Mobility

4. Economic Consequences :

Economic disadvantage leads to poverty. Poverty leads to deprivation and deprivation breeds poverty by a vicious circle popularly called 'culture of poverty'. Economic factors are cause for poverty and the effect of poverty. Lower economic status leads to disadvantage. But how does disadvantage and deprivation lead to poverty as an economic consequences ? Pareek (1970) presents a model wherein there are two mediating factors :

1. Expectancy
2. Motivation

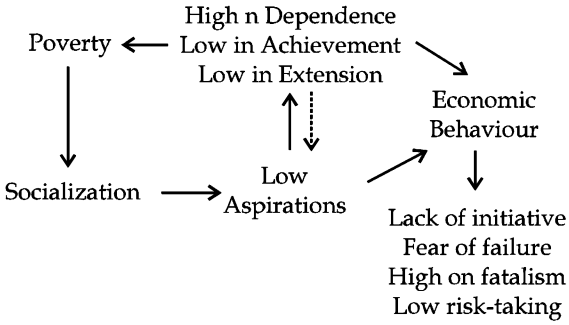
This model has been discussed in page the chapter on Community Psychology. Basically, Pareek states that economic development depends on three factors :

$$D = Am \times Em - Dm$$

Poverty gets reinforced because of the unique motivational patterns among the deprived groups. Deprived groups are high on the need for dependence (Dm) and low on achievement motivation (Am) and extension motivation (Em). Prof. J.B.P. Sinha has found that in scarce resource conditions, deprived groups show hoarding behaviour rather than sharing behaviour. This shows that they have lower Em. Giriswar Misra (1982) has observed that deprived groups are lower on Am than non-deprived groups. No wonder, the economic development among deprived groups is lower.

It has also been seen that deprived groups have lower expectancies. Prof. Durganand Sinha (1969) found that villagers from less developed villages showed either unrealistic aspirations, or very low levels of achievement. **Rath, A.S. Dash and U.N. Dash** (1979) have also found that the occupational aspirations of scheduled castes and scheduled tribe children are low.

The nexus between economic consequences of deprivation (poverty) and motivational patterns and expectancies can be represented as under (based on Pareek, 1970) :



A.K. Singh (1983) aptly observes that the culture of social disadvantage inculcates the *psychology of a puppet* characterized by helplessness, self-pity, apathy, pessimism and fatalism.

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n Educating and Motivating the disadvantaged

The most potent instrument for developing the conditions of the disadvantaged is by social mobility, and social mobility can best be possible through **academic achievement** and **entrepreneurship**. Motivating the disadvantaged towards entrepreneurial development has been separately covered in the chapter on economic psychology. In this section, the focus is on early interventions to educate and motivate disadvantaged children for academic achievement. Why early intervention? Because "psychological intervention, are rooted in the assumptiopn that human development is critically shaped by the **experiential base** received by a person. The interventions generally aim at strengthening and equipping individuals from disadvantaged and deprived backgrounds with skills and competencies necessary for effective functioning in the society". But before discussion on interventions to educate and motivate the disadvantaged, it is necessary for us to understand the problems faced by the disadvantaged.

Educational problems of disadvantaged children

Many studies have focussed the impact of socio-economic disadvantage on academic achievement. The academic achievement of deprived group children are generally lower than that of children from advantaged groups, due to a variety of reasons including home environment, parental support, school climate, teacher expectancy and self-efficacy etc. Some of the research findings on this issue are :

Home environment : Parental support directly affects academic interest and academic achievement. In a series of studies, A.K. Singh and his colleagues (A.K. Singh, 1983; A.K. Singh and Jaiswal, 1981) have shown that parental support compensates for the adverse effects of low SES. Ironically, the home factors are not usually strong in low SES families. Many come from families with parental psychopathology, family conflict, broken homes, harsh and inconsistent parenting etc. Parents usually do not stress on academic achievement because they themselves have low expectancies; they are high on need for dependence and pass on this attitude to their children.

Teacher expectations : *Pygmalion* effect refers to a self-fulfilling prophery whereby people tend to behave the way others expect them to behave. The first major experiment demonstrating pygmalion effect in children was by Rosenthal and Jacobson (1968), and it was in the school setting. The researchers applied a standard Ice test to children in an elementary school at the beginning of the academic year; 20% of the children were selected at random and the researchers told the teachers that these 20% have scored high on Ice tests and hence have unusual intellectual abilities. When the children were retested at the end of the academic year, these children showed massive gains in Ice, relative to other children, Rosenthal and Jacobson, concluded that this was because of **subtle effects** of the teachers' expectations. As in this study, unfavourable teacher expectations can lead to lowered academic achievement.

This is exactly what happens in the case of deprived group children. For instance, Rath, A.S. Dash and U.N. Dash (1979) found that maximum number of Brahmin students and

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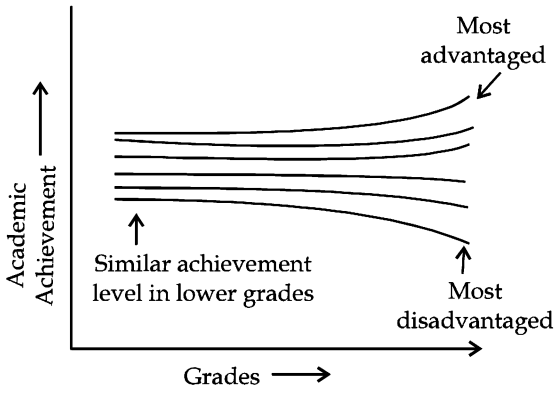
minimum number of Scheduled caste students were labelled by teachers as good in studies. Teacher expectations, further, exactly reflected in school achievements of Brahmin and Scheduled Caste students. Problem is, social class and caste significantly influence teacher expectations about student success. This may be because of deep-ingrained stereotypes or prejudices of the teacher. Even in the face of information which prove teachers wrong, such as success of low caste students whom teachers expected to perform poorly, teacher expectations are maintained (R. Sharma, 1985). This is because teachers attribute the success not to the child but to chance or faulty tests. Low caste students internalize these patterns of attribution of teachers and develop an *external locus of control*.

Learning Deficiencies : As has already been discussed, disadvantage and deprivation are accompanied by lower cognitive and intellectual development . For example, children suffering from prolonged deprivation are found to suffer from deficiencies in cognitive abilities (Misra, 1987) higher mental tasks requiring language skills (D. Sinha, 1982) and in general levels of intelligence, perceptual abilities and spatial skills. This is manifested in learning disabilities.

An interesting trend seen is that differences in cognitive factors between students belonging to the socially advantaged and socially disadvantaged sections is not large in lower grades. This may be because prolonged deprivation shows effects in later grades. Research results confirm that the differences between the two groups become progressively larger with each grade in the school. For instance, A.K. Singh (1983) drew the academic achievement curves of the socially disadvantaged and advantaged groups and found that they were in the form of a broom-stick. They were narrow at lower grades but became wider in favour of advantaged students in later grates. This can be represented as :



School climate : School climate has a direct influence on the academic achievement of students. **Rath** (1976) has noted that **hostile climate** of the school compel socially disadvantaged children to drop out of school. On the other hand, **supportive school c limate** is conducive for the development of positive self - concept, high need for achievement, realistic level of aspirations and low degree of fear of failure (Pandey & R. C. Tripathi, 1982).

The **peer group** is a singularly important factor affecting academic achievement. Pande (1980), for instance, found that lack of peer support is responsible for the irregular attendence of Scheduled Caste students in school. Another issue is the role of peer groups in schools with mixed groups of students. It has been found that clubbing together deprived and privileged children in the same school leads to lower academic success for deprived children than if they study in ordinary schools with all

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peers from similar background (D. Sinha, 1982). This may be because they are probably discriminated for their deficiency which further retards their learning process (J. B. P. Sinha, 1990). Further, having homogeneous peer groups is better as it lends the student security and warmth; the negative effects of self-fulfilling prophecies are also low.

Language : Annamalai (1987) has observed that many of the educational problems of lower-class children may be due to differences between home language dialect and school language. A. K. Mohanty and M. Mohanty (1985) studied students from disadvantaged groups of Orissa and found that the duality of school language (English) and home language (Oriya) leads to linguistic handicaps. This problem is especially acute in the case of tribal students; tribals have their own dialect distinct from English as well as regional languages (Oriya, Hindi, Tamil etc.). When they are made to attend English medium or Oriya medium or Hindi medium schools, they start off with a disadvantage !

Now that we are aware of the various problems faced by disadvantaged groups in education, we can move on to **strategies to educate and motivate the disadvantaged.** These can be dealt under the following headings :

1. Psychologists' suggestions for structure change
2. Psychological interventions
3. Community - based intervention
4. Strategies to motivate children in school.

1. **Structural changes** : Structural changes in the school climate include changes in curriculum, training of teachers and appointment of teachers from similar background, counselling etc. Change in curriculum is essential because children from deprived groups usually belong to a culture much different to the culture of mainstream societies. The curriculum should reflect their cultural outlook and world view. More emphasis should be given to teaching subjects that have **functional significance** for them. Support in the form of counselling and guidance are important. **Liddo and Khan** (1990) have demonstrated that counselling of bright underachievers from rural background leads to self-understanding, self-acceptance and enhanced academic performance.

   Going a step further, A. K. Singh (1983) argues that since the deprived children lack parental competence and parental support relevant to their schooling, the school should function as a substitute for family and friends. He, therefore, advocates *"Ashram type"* schools. Perhaps **residential schools** with good infrastructure may salvage the deprived group students from the unfavourable conditions of their families.

   Pre - school education has been strongly recommended for deprived group students. The logic is that when joining schools, the deprived group students are already at a disadvantage with respect to advantaged group students. This is because of the rich **experiential base** students from advantaged groups get. In a study in Orissa, **Jachirck and Chatterjee** (1989) have reported that preschool education has significant effect on cognitive abilities of children.

2. **Psychological interventions** : Psychological interventions are based on the assumption

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that human development is critically dependent on the experiential base of the person. Hence, major psychological interventions have looked into compensatory mechanisms for lack of experimental base of deprived group students. Few major interventions are :-

(a) Family interventions

(b) School-based interventions

(c) Cognitive interventions

Family based interventions aim at increasing the expectancies of parents and motivate them to develop attitude conducive to child education. Ananda Lakshmy (1990) has observed that an intervention programme is most likely to succeed if mother is involved in the programme. Thus intervention programmes should aim at **educating mothers** on the importance of **stimulating play activities**. Mothers should also be trained in skills that would enable them to offer a stimulating environment for their children.

Similarly, interventions in the school setting should focus on creating a rich experiential base for students. Sandeep and Pushpa (1981) propose that efforts for developing curriculum, teacher training, modification of school organization and innovations in teaching methods for disadvantaged students must be coordinated by school psychologists.

Many studies have shown the efficacy of **cognitive interventions** in developing the cognitive skills of the disadvantaged. Rath (1982) argues that though there are manifest learning disabilities, the children from the deprived groups are not deficient in basic neurocognitive functions, hence manifest learning disabilities disappear after a short training course. Rath has suggested that learning deficiencies can be overcome using intervention programs based on :

1. Perceptual training
2. Behaviour modification
3. Form-discrimination and
4. Reinforcement processes.

A few other techniques recommended by various scholars are :

5. Verbal self-instructional training
6. Operant manipulation of response and reward
7. Self-efficacy treatment
8. Brainstorming
9. Hypothetical problem solving

Rath (1952) had studied the effect of verbal self-instructional training and operant manipulation of response and reward on children from low SES tribal families and daily labourers in Orissa. He found that both kinds of training were effective in remediation of impulsive tempo in children.

Singh (1983) reported that high self-efficacy treatment also improves the intellectual abilities of disadvantaged group children. Lastly, **Verma & Verma** (1994) used techniques like brainstrorming, generation of alternatives, and hypothetical problems solving for a period of 16 weeks to successfully increase the **problem solving performance** of deprived children.

3. **Community-based Interventions** : Community-based interventions are based on the philosophy that community participation is most effective way to provide alternative educational and vocational training opportunities to the disadvantaged.

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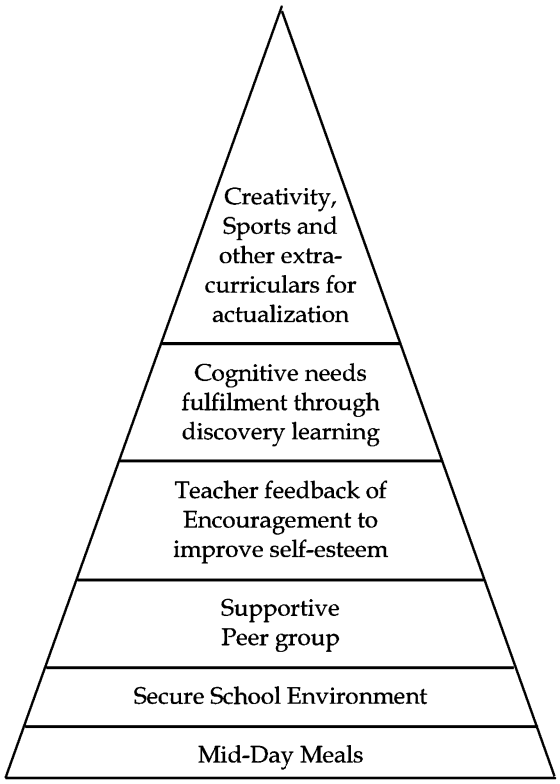
In recent years, many NGOs and social agencies have got involved in educating and motivating the disadvantaged towards development. A few notable organizations are (Misra & Mohanty) :-

1. Alripu, New Delhi
2. Eklavya, Bhopal
3. Gyan - Prabodhini, Maharashtra
4. NANBAN, Madurai
5. Butterflies, Delhi
6. BOSCO, Cochin
7. PRACHITI, Pune

Alripu is an education provider that adopts a non-pedagogic approach by allowing learners to program at their own pace. **Eklavya**, on the other hand, works in association with the formal education system. Its attempt is to bring about changes in formal school education. **Gyan-Prabodhini** extends opportunities for all-round development of youth from deprived groups. It promotes leadership qualities, motivation and vocational training among the youth.

NANBAN, BOSCO and Butterflies are organizations involved in rehabilitation of street children, destitutes and working children. In their effort to integrate these children to the mainstream, they undertake vocational training and practical education for these children. PRACHITI trains youth from slum background for social work.

4. **Strategies to motivate the disadvantaged in school** : Before investigating various strategies to motivate the disadvantaged to join schools, it is necessary for us to understand the needs of the student. Indian schools are marked by large absentees, drop-outs and lack of interest in studies. Hence, an exercise in building a need hierarchy may be undertaken. I propose the following hierarchy :


Creativity, Sports and other extra-curriculars for actualization
Cognitive needs fulfilment through discovery learning
Teacher feedback of Encouragement to improve self-esteem
Supportive Peer group
Secure School Environment
Mid-Day Meals

Some **general strategies** to motivate students towards academic achievement are mentioned in the chapter on Education Psychology. **Specific strategies** to motivate the disadvantaged group children are essential because the needs and orientations of these students are quite different. Certain specific strategies are :

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Increasing Self - efficacy : Most students from deprived groups show a pattern of attribution in which they attribute success to external factors and failure to themselves. (Sinha). This motivational pattern can be changed only by increasing their self-efficacy. To increase self-efficacy, **role models** can be introduced for vicarious reinforcement. An individual similar to the children who has achieved much in life can act as role model. Sometimes, **local leaders** and teachers themselves can act as role models. **Verbal persuasion** also is a potent method to increase self-efficacy. The messages we get from others that affirm our abilities strengthen our **efficacy beliefs**.

Systematic Goal Setting : Setting challenging yet achievable goals increases the motivation towards academic success. The children from deprived groups aren't motivated by long-term rewards, rather by instant gratification. For them, goal-setting in a systematic manner increases competence. Five guidelines for goal-setting can be summarized as SMART (Paner and Smith, 2007).

S – Specific

M – Measurable

A – Action-oriented

R – Realistic

T – Time - based

The first step is to set a **specific goal**, Ambiguous goals frustrate the student. Secondly, the progress towards the goal must be **measurable** and the student needs to be provided **feedback** on a regular basis. Feedback acts as a reinforcement that the student is progressing towards the goal. The goals must be *action-oriented* i.e. goals must be regarding means, not ends. For instance, suppose you set a goal for disadvantaged group learners to get A grade in any subject it is outcome-oriented goal. If the student is unable to get A-grade, she attributes the failure to herself and her motivation decreases. On the other hand, if you set a goal that she should learn certain chapters it is action-oriented.

The goals set should be difficult but realistic, i.e., must be of moderate difficulty. Easy goals may frustrate the learner and too difficult goal may discourage her from striving for it.

Finally, to keep the goalsetting program on track, it is important to define a time frame within which to reach at the goal.

AM, EM & DM : Pareek (1970) has identified three factors that affect the motivation towards development :

- Achievement Motivation (AM)
- Extension Motivation (EM)
- Dependence Motivation (DM)

He states that economic development is a function of these motivations (= AM × EM – DM). He identifies these as three factors behind the poverty of deprived groups. Hence, we should inculcate AM & EM and discourage DM in schools. AM can be increased on the lines of the Kakinada Study (McClelland & Winter, 1969). P. Mehta (1976) has developed an intervention program in the educational setting on the lines of the Kakinada setting. This can be used to improve AM among disadvantaged children. EM refers to extension motivation, i.e., motivation to co-operate with others in a social setting

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towards a goal. EM can be increased by devising programs on the lines of Robbers' cave experiment of Sherif (Pareek, 1970). The *jigsaw technique* developed by Aronson and his coworkers (1978) and other cooperative learning programs can be used to increase EM. Johnson (2000) observes that these programs lead to an increase in self-esteem and academic achievement and decrease in prejudices.

High need for dependence (DM) develops in children during the socialization period when the hopelessness, powerlessness, fatalistic attitudes and fear of failure of family members are internalized. Dependence motivation can best be countered by **education** during which fear of failure and lack of initiative can be replaced by **realistic aspirations**. Prof. Pareek (1970) suggests that dependence motivation can be decreased effectively by use of *sensitivity training* wherein children experiment with new patterns of behaviour and develop interdependence in place of dependence.

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9

Psychology of Social Integration & Prejudice

- Social Integration : The concept
- Nature and Manifestation of Prejudice
- Causal factors of social conflicts and prejudice
- Dimensions of social conflict and prejudice : caste, religion, language
- Psychological strategies for handling conflict and prejudice
- Measures to achieve Social Integration

Psychological Problems of Social Integration

n Social Integration : The Concept

Indian society is a multi-cultural, multi-ethnic one in which people are divided on the basis of religion, caste, creed, tribe, ethnicity, race and other myriad parochial lines. In such societies, not all groups have equal access to resources. This leads to a conflict of interest. However, this conflict of interest is not just economic in nature. There are social, structural and psychological variables involved in such inter-group tensions.

Social integration refers to an attempt made to reduce social tensions and create a common identity among members of a society about being part of the society. If you seek to create a common identity among members of a nation, it is known as **national integration**.

Why social integration? Because social tensions, prejudices and conflicts are social problems. They are dysfunctional to the society and dangerous to the people and society at large. How social integration? By creating a common consciousness, a common we-feeling among members of the community : what our constitution calls fraternity.

How can this common identity and common consciousness lead to social integration? Basically, an individual has many identities at the same time. I am an Oriya by language, an Aryan by race, an agnostic by religion, a Hindu by culture, a Khandayat by caste, a Kshatriya by Varna and a male by gender. I have numerous identities, but not all my identities are active in social interaction. There is only one manifest identity at one time. For example, when the Assamese people mobilized against Bengali

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people in Assam, one group (the Assamese group) was formed on the basis of linguistic identity against another group (the Bengali group). But later, when the Assamese people agitated against illegal Bangladeshi migrants to Assam, their manifest identity was 'Indian' versus 'alien'.

The aim of social integration is to make a common manifest identity among diverse sections of population. You may be Oriya, Tamil, Bengali, Hindi, Gujarati, Hindu, Muslim, Christian, Munda, Ahir, Brahmin, Meena etc., but if a 'WHO AM I ?' test (basically this test has a list of twenty blanks. You have to write how you define yourself in the order of importance of your various identities) is administered, and you put "Indian" before other identities, it is an indication of social integration. For example, suppose one writes :

1. I am Smarak Swain
2. I am son of Mayadhar Swain
3. I am a bureaucrat tax collector
4. I am an Indian
5. I am an Oriya
6. I am a resident of Bhubaneswar
7. I am a Hindu

.
.
.
.
.

20. I am .....

In this, we see that the individual's "Indian" identity is stronger than his "Oriya" identity. If a majority of people of a nation have their nationality ("Indian" here) as their manifest identity, a we-feeling develops. While boundaries of language, caste, race, religion etc. still exist, they don't create social tensions.

Group Formation, Favouritism and Fanaticism

The concept of social integration can't be appreciated properly without understanding what happens when social integration fails. As I have already marked, an individual's group is based on her manifest identity. What if the manifest identity of a small group of people is being "Oriya" rather than being "Indian" ? A small group of Oriya chaurinists develop. Each member has favourable attitude towards other Oriyas, but not to other non-Oriya Indians. This group looks at others as an out-group.

As a group favouritism develops (due to psychological factors discussed later in this chapter) contact with out-group decreases. Prejudices about out-group become strong. This small group influences other Oriya people, so that the group becomes strong and looks at other communities with disdain. Rumours and false attributions like "Bihari immigrants are spoiling our economy", "Marwaris are dominating our business", "Bengalis are selfish and mean" become deeply ingrained beliefs.

The next step of inter-group tension, if not controlled, is escalation to conflict and violence. Poor Bihari immigrants or Marwari businessman may be targeted in this hypothetical case. Once conflict breaks out, the manifest identity becomes stronger. For example, the Sikh community always seemed to be a group within the larger Hindu community. The events of 1970s and 1980s led to a strong identity among Sikhs about being a separate religion.

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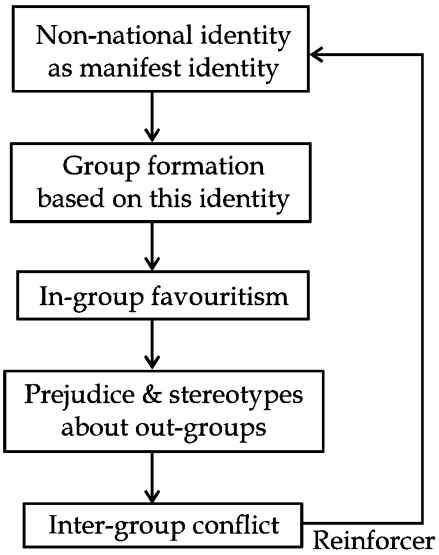

n Nature and Manifestation of Prejudice

'Prejudice is an attitude (usually negative) towards the members of some group, based solely on their membership in that group .....'

– Baron and Bryne (1991)

An attitude is a consistent manner of thinking and feeling about people, groups, objects and events. An attitude 'towards a socially significant material is called a social attitude. Social attitudes are individual attitudes directed towards social objects'. (Venkatasubrahmanyan, 1973, p.6) Prejudices are negative social attitudes. But mind it, just as attitude, prejudice is an individual level phenomenon. Then how does prejudice manifest in groups? Venkatasubrahmanyan (1973) explains that when individual attitudes become strongly inter-conditioned by collective contacts they become highly standardized and uniform within the group. They become collective attitudes. Collective attitudes, i.e., similar predispositions of disfavour in many people, turn out to be "group prejudices" that usually affect one or the other aspect of intergroup relations in a society. The social psychological problem of group prejudices arises when many people have similar predispositions regarding an out-group' (ibid, p.7)

Nature of Prejudices

Prejudice is a type of attitude. Hence, it has all the three components of attitudes :

- The **cognitive component** of prejudice is **stereotype**. Stereotypes are exaggerated beliefs about a group based on irrational attributions. Basically, we humans continuously make pre-judgments in the light of insufficient evidence. Suppose you stay in a hostel and find that the Bengali student in that hostel stay untidy, you make a judgment that "all Bengalis are untidy". Basically, you generalize few instances without sufficient evidence. This leads to stereotypes.
- The **affective component** refers to a deep feeling of hostility towards a group. This includes racism, casteism and sexism. This component is strong in an individual if such emotional hostility has been imbibed from parents and family. The cognitive component can be changed relatively easily by showing that members of a group don't conform to stereotypes, but it is tough to change affective components.
- **Behavioural component** of prejudice is prejudice in action. Emotional hostility (effective component) provides motivation to act against a group. Stereotypes function to justify negative emotions towards the out-group. Finally, the action (behavioural component) towards a group determines the

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manifestation of prejudices. Allport (1954) proposes that the manifestation of prejudices in behaviour towards an out-group varies from minor to major forms. He has talked about five stages in the continuum from minor behavioural discrimination to major ones :

1. **Antilocution** : This refers to hostile talk, verbal denigration, jokes etc. Antilocution was widely practised among upper castes in relation to lower castes in traditional India.
2. **Avoidance** : Keeping a distance from members of a group, but not actively inflicting harm. This was widely practised against the untouchable castes in India. In deed, that form of avoidance was institutionalized. It was believed that untouchables are 'polluted' and should be stayed away from. Another instance I can give from personal experience. I frequent a locality for good food. This locality has a majority of Muslim residents. Surprisingly, many of my friends I invited there have been uncomfortable about going there. They just want to avoid the locality !
3. **Discrimination** : This refers to actively and explicitly expressing one's attitude in conduct towards a group. Many Punjabi landlords of Rajinder Nagar in Delhi have severe prejudices against Biharis. When Bihari students come to Rajinder Nagar to prepare for civil services, they find it tough to get rooms on rent because of discrimination! (It is also possible that I am prejudiced that Punjabi landlords are prejudiced against Bihar students. This example is not based on empirical evidences)
4. **Physical attack** includes all types of communal riots, violence against dalits, nativism etc. Take the case of anti-North Indian violence in Mumbai. Of course, it is politically motivated, but many participants actually have negative feelings against north Indians.
5. **Extermination** means to drive a group of people out of the country or kingdom due to prejudices and hostility. Thankfully, this case is not applicable to India owing to a rule of law enforced on the basis of the constitution.

The nature and manifestation of prejudices between in-group and out-groups will be made more clear in subsequent sections when we study various theories of prejudices and social conflicts.

Causal Factors of Social Conflicts and Prejudices

Social conflicts are a product of multiple causes. These causes are also varied : there are political, social, economic and psychological causes. In this section, we will investigate certain causal factors of social conflicts from a socio-psychological perspective. You must bear in mind, all through, the difference between **conflict and prejudice.** Prejudice is both the cause and effect of conflict. Yet prejudice is neither necessary nor sufficient condition for conflict. In this section, we will concentrate on theories and perspectives behind both social prejudice and social conflict.

Broadly, these theories are of two types: theories that search for causality in the individual personality and those that search for the causes in group dynamics. The first set of theories is dominated by psychoanalysts like Adorno, Kakkar and Dollard. However, these theories have increasingly come under criticism.

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Personality factors

Social phenomena like riots, caste conflicts and tribal agitation are inter-group in nature. But is it possible that there are some *basic traits* that predispose the members of these groups to indulge in some acts ?

Adorno and his colleagues set out to find an answer to this question in Nazi Germany in the 1940s. They used techniques like interviews (to find out political views and childhood experiences) and projective tests like the thematic apperception test (TAT) designed to reveal unconscious attitudes about the minority Jewish group. Adorno and his colleagues (1950) concluded that some children are subjected to harsh and authoritarian parenting style in childhood. While these children consciously have very high opinion of their father, they are hostile towards their fathers unconsciously. Unable to resolve the conscious adulation and unconscious hostility, they project their hostility onto minority groups. Hence the authoritarian personality refers to people who are rigid and inflexible, and are intolerant to ambiguity. They submit to authority (a result of conscious adulation to father authority right from childhood) and are hostile to people of lower status.

Sudhir Kakar (1990) has proposed another dimension of the psychoanalytic tradition. While considering ethnic violence in India, he observed that group identities fulfil some psychological functions. Basically, the human psyche has both a "good self" and a "bad self". A psychologically healthy person successfully integrates her good and bad selves. (If you are one of those people who introspects, are aware of your shortcomings and are ready to accept that you are wrong when reasoned to logically, it means you have a well integrated self). If one is not able to integrate her good and bad selves, she feels anxiety whenever her bad self surfaces.

Kakar states that to increase her feeling of well-being, the narcissistic personality suppresses the bad self into the unconscious. She is good and her group is good. She places her group at the centre of the universe and projects the bad self on others. The object of projection can be a caste, ethnic or religious community.

Why does a person become narcissistic? Kakar explains that in the process of socialization, often parents nurture narcissism in children. You tell me, have your parents ever told you that partition of India in 1947 happened because of communal politics. No. They say Jinnah was solely responsible for partition. Have your parents ever told you Hindus have killed members of minority community in riots, and that it was bad? Most parents are either neutral or sympathetic to rightist terror organizations that kill innocent women and children in the name of Hindutva. This reinforces the perception in Hindu children that "Hindus are good". While the fact that Hindu rioters have done dastardly acts (like rape pregnant women, burn children to death) is not focussed on, we and our significant others highlight the fact that innocent people died in terrorist attacks (and we attribute the terrorists to a "bad group": Muslims of India).

My point here is, both Hindu group and Muslim group (and for that matter other groups) have "good" and "bad" characters. In every group there are people with extremist views and extreme ideologies, so also people with rational, modern attitudes. But during socialization, we are taught that ours is a good group. Hence we project the bad characteristics onto other groups. Not only parents, group

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myths also nurture narcissism. For example, the political struggle between Rana Pratap and Emperor Akbar was a political struggle after all, between the greeds of political elites. But when any one narrates the story myths are narrated : not the political struggle but the struggle between a "Hindu Rana" and an "imperial Muslim ruler" is narrated to children.

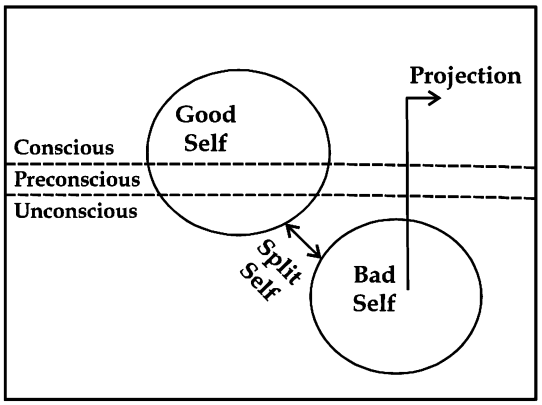

Fig : Psychic characteristics of a narcissistic personality

Kakar reasons that 'Hindus are regularly possessed by Muslim *bhutas* and these Muslim *bhutas* are considered the strongest, vilest, most alien, demonic projections of the unconscious Hindu mind. The Muslim demon is the traditional container of Hindu conflicts over aggressive impulses. While under its influence, a Hindu may well transgress deeply held taboos regarding violence. (see Hutnik, 2004). Basically, the bad self that is suppressed into the unconscious is a 'demon' that threatens to come to the conscious. Not able to accept a demon within himself, the Hindu uses defence mechanisms to make it a Muslim demon, a 'Muslim bhuta'.

Shortcomings of these theories

Today, the psychoanalytic school doesn't find many adherents. Its most objectionable proposition is that it considers the individual as the cause of group prejudices. During conflicts, even the most rational persons show group favouritism. Does it mean that all the members of that group have gone through harsh and authoritarian parenting style ? No !

Further, the authoritarian personality explains aggression by a majority group member towards a minority group member; not the other way round. For instance, take the case of Sikh terrorism. The Hindu-Sikh tension first arose in 1970s. Before that, there was not much hostility between Hindus and Sikhs. Does it mean in this specific generation majority of Sikh youth had harsh and incorrect child rearing ? Why did the minority Sikh group develop hostility towards the majority Hindus.

According to Nimmi Hutnik (2004), group dynamics is much more important than personality in explaining ethnocentrism and prejudices. Still, it was important for us to study these theory because they explain individual differences in prejudice and conflict within a group. Now, we will turn our attention to the frustration-aggression theory that finds causality in environmental factors (rather than the person or group), yet follows the psychoanalytic school in explaining its theory.

2. Frustration-Aggression Theory

The frustration-aggression hypothesis of Dollard et al. (1939) suggests that frustration always produces aggression. Frustration is a necessary and sufficient condition for aggression. If a society is economically poor, people will be frustrated due to the hardships of poverty and there will be an escalation of

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prejudices. Environmental factors like poverty produce frustration. Frustration produces aggression. Aggression may be dissipated by catharsis (for instance, playing sports is a channel to dissipate aggression energy) or it may be displaced. By displacement, the frustration is directed not towards the real source of frustration but against a weaker, inferior target.

Though the theory has many shortcomings, it is quite relevant to the conditions in India. To test the relevance of this theory in India, Shukla (1988) studied 240 college girls of Bodh Gaya. She found that upper-caste girls had greater tendency to find a scapegoat for frustrations than lower caste girls. This validates the theory's stand that majority groups (here upper caste) displace their frustration on weaker targets. Scapegoats are weaker and inferior people who aren't the cause for frustration but bear the blame.

3. Theory of Relative Deprivation

Political scientists like Gurr (1970) and Runciman (1966) have found that when we perceive a deprived state, we don't perceive objective deprivation. Rather, it is our expectations that we use as indicator. Hence, they conclude that the sense of deprivation is subjective. This relative deprivation may be a result of prejudice and also a cause for prejudice.

There are two types of relative deprivation :

1. **Egoistic** relative deprivation, based on comparison of self with other individuals.
2. **Fraternalistic** relative deprivation based on comparison of in-group with other groups.

Fraternalistic relative deprivation explains various caste and religious tension in India. The pro-reservation and anti-reservation agitations by various caste groups are because of relative deprivation. High caste people are much more prosperous than OBC/SC/ST groups statistically. Yet they feel relatively deprived when greater reservations are given to other groups. When the government introduced 33% reservation for OBCs in educational institutions in 2004-05, there were widespread protests. This was inspite of Dr. Manmohan Singh's assurance that the number of seats for general category won't be reduced; only extra seats will be added. During the agitation, many ideological and emotionally toned articles and speeches had created feelings of hostility (affective component of prejudice) between general and reserved category students.

This theory also explains conflicts and social tensions in Hindu-Muslim, Hindu-Sikh, ethnic majority-tribal and linguistic relation. Tripathi and Srivastava (1981), for example, found that among Muslims feelings of relative deprivation in terms of political freedom, job opportunities etc are associated with more hostile attitudes towards Hindus. Those Muslims who were low on relative deprivation showed lesser hostile attitudes.

4. Realistic Group Conflict Theory

People have their own group as the centre of their lives and rate other groups with reference to their group. This tendency of individuals is called ethnocentrism. Hence, there is a need to study the dynamics of inter-group relations. A landmark in the study of inter-group relations is the realistic group conflict theory.

In the now famous Robber's cave experiment, Sherif and his coworkers (1961) took 22 white, middle-aged, protestant children to a summer camp. They were divided into two groups : the Eagles and the Rattlers. In the first stage, each group had to work on some task that needed cooperation within the group. Sherif observed

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that very soon, a group identity developed in both groups. In the second stage, the two groups were exposed to each other. A sports tournament was organized between the two groups. This led to considerable inter-group tension. Rattlers stereotyped all Rattlers as brave, tough and friendly, and all Eagles as sneaky and stinker. Reverse was true for Eagles. The tension precipitated into open conflict even before the tournament started and the Rattlers' flag was burned. A fight ensued and the camp counsellors had to intervene to stop the fight.

Sherif concluded that inter-group conflict arises as a result of a conflict of interests. *Competition is a sufficient condition for hostility or conflict*. Sherif's study has been validated by many other studies. Many sociological studies in India have found that riots take place in those cities where Muslims are relatively prosperous. In general, we can state that the relation between two groups vary from cooperation to competition on a continuum. More the competition, more is the inter-group tension and more is the prejudice against the outgroup.

This theory was a landmark in studies of prejudice when it was proposed: it stressed that the causality of prejudice and conflict lies in inter-group relations, not interpersonal relations. However, this theory has also been challenged by many later scholars.

5. Social Identity and Categorization

In reaction to Sherif's contention that competition leads to inter-group conflict and prejudice, many scholars, notably Tajfel (1981) argued that group favouritism comes naturally to groups. Tajfel found that mere categorization of subjects into two groups is sufficient to produce group favouritism. Tajfel used random toss of a coin to separate some participants into two groups. He found in-group preferences even in these groups.

He explains that an individual always tries to maintain a positive self-image. This self-image has two components :

1. Personal identity 2. Group identity

To have a better self-image, people try to maintain a better group identity. For a better group identity, we are motivated to view our group as positively as possible. Hence, we highlight its differences from other groups and undermine the similarities.

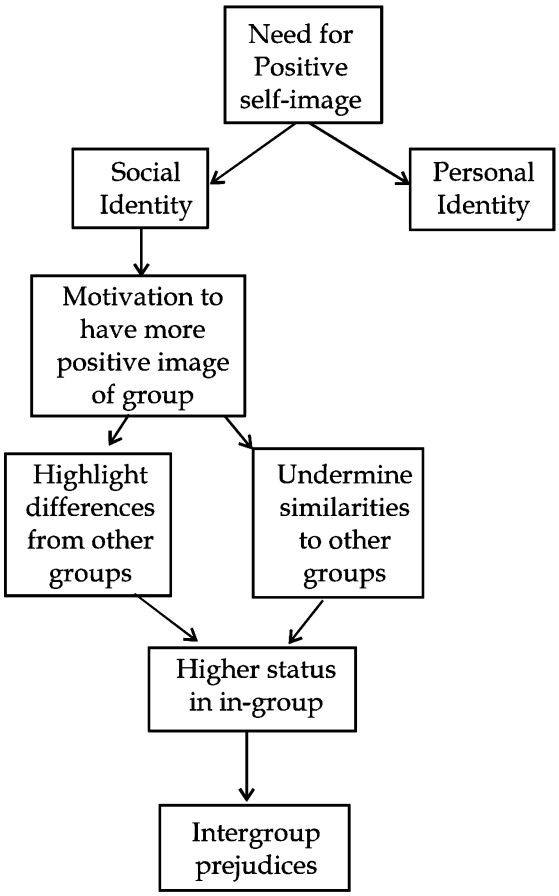
Need for Positive self-image
Social Identity
Personal Identity
Motivation to have more positive image of group
Highlight differences from other groups
Undermine similarities to other groups
Higher status in in-group
Intergroup prejudices

Fig : Social identity dynamics

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The social identity theory essentially implies that the stereotypes that one holds about one's own group should be significantly more favourable than those of the outgroup. Indian researches have validates this point. For instance, Hussain (1984) found that both Hindus and Muslims evaluated the ingroup significantly higher on affiliation and the outgroup was evaluated higher on aggression. Khan (1988) found that Hindus have negative, derogatory images of Muslims regarding their physical appearance. Muslims, on the other hand, perceived Hindus as money spinners who charged high interest rates, and were dishonest, jealous and unreliable.

6. Norm Violation Theory

We hear many news about how a trivial event like killing of a cow by a Muslim leads to riots; playing music near a mosque leads to violence etc. How can such large-scale conflict result from something so trivial ?

de Ridder and Tripathi (1992) have forwarded the norm violation theory (NVT) to explain this. What happens when a member of one group (say Muslims) violates the norms of another group (say Hindus) ? According to this theory, violation of norms of group B by group A results in group B attributing malevolent intent to group A's behaviour. This, in turn, provokes a negative reaction from group B towards group A. This negative reaction of group B violates the norms of group A. Group A believes that group B did it intentionally, with malevolence. When the situation escalates, violent group behaviour results.

This theory is important because it helps us understand that conflict happens in stages. Intergroup conflicts usually start with very trivial issues (like a fight between two students, or a small argument etc.) and escalate to large-scale violence. This theory provides a causal factor behind escalation of conflict.

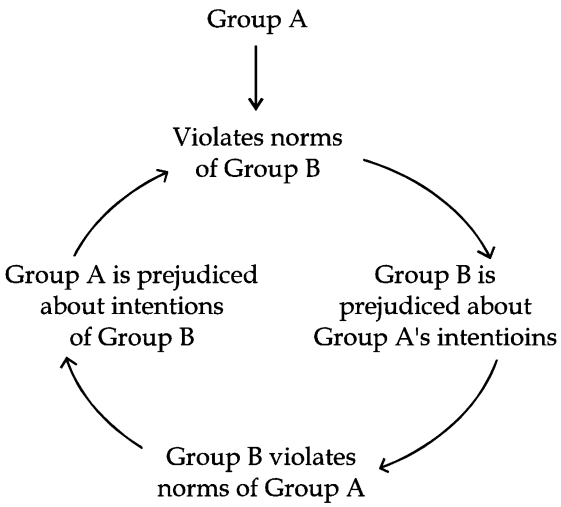
Group A
Violates norms of Group B
Group B is prejudiced about Group A's intentioins
Group B violates norms of Group A
Group A is prejudiced about intentions of Group B

Fig : Norm Violation mechanism

7. Role of child rearing

Psychologists widely acknowledge the fact that ethnic identities are a major cause for prejudices, and that ethnic identities develop during the process of socialization. Major factors that play crucial role during socialization are parenting style, attitudes and prejudices of parents, community one belongs to etc.

For instance, Hassan (1983) had divided parents into four categories and compared the development of prejudice in children of these four groups of parents. The four categories are:

(a) Prejudiced parents

(b) Prejudiced father and unprejudiced mother

(c) Prejudiced mother and unprejudiced father

(d) Unprejudiced parents

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Hassan found that children of prejudiced parents showed the highest degree of prejudice, while those of the fourth category showed least. A.K. Singh (1985) has found that religious identity (i.e. ethnocentrism) develops very early in childhood. He compared four religious groups (Hindus, Muslims, Sikhs and Christians) and found that majority of children from all these religions learn to show a preference for one's own religion as early as 4-5 years of age.

Some general findings with regard to development of ethnocentrism and prejudice in children are :

(a) Prejudice increases with age (Vyas, 1973).

(b) Religious identity and prejudice are inter-related and religious identity develops earlier.

(c) Different types of prejudices emerge at different age levels. There is a sequence in the development of different types of prejudices : first sex prejudice, followed by caste, religious and class prejudice in that order (N. Sharma, 1978).

(d) Religious identity and ethnocentrism keep increasing till 8-9 years of age and become stable after that age. Hence, prejudices 'harden' after one reaches 8-9 years of age (A.K. Singh, 1985).

(e) Many studies have found that ethnic identities and prejudices are stronger in minority communities. Hence, it can be concluded that minority status strengthens ethnic identity.

8. Economic Factors

We have already concluded from Sherif's realistic group conflict theory that competition, including economic competition, leads to conflict. Economic competition is a strong factor in communal riots in India. For instance, Engineer (1984) suggests that some features common to riots are :

- A section of Muslims is economically well off and appear to be potential economic competitors to Hindus.
- Core issues are economic or political, ignited by some trivial incidence.
- Riots are preplanned rather than spontaneous. Hence, economic motives rather than emotionality is the major reason behind riots.

Increasingly, the riots taking place in recent times are characterized by loot, plunder and destruction of property. These indicate the economic motive behind the conflicts. A.K. Singh (1988) makes an interesting observation that the jealousy that leads to conflict is itself irrational. A few members of the Muslim community or Dalit community become prosperous, and they are perceived as the symbols of the community. In objective terms, the community as a whole may be economically backward, but the envious perceive all members as equally prosperous.

9. Leadership as a factor

Many sociologists and political scientists have highlighted the role of political elites in the instigation and spread of riots. They argue that political elites themselves are pretty secular but mobilize people on narrow parochial lines to meet their narrow political interests.

Psychologists explain this as: 'At moments of societal crisis otherwise mature and psychologically healthy individuals may temporarily come to feel overwhelmed and in need of a strong and self-assured leader' (Post, 2004, P. 196). Post calls these leaders as "hate mongering" leaders who fulfil their personal ambitions by harnessing the need for followers

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to follow a leader. The follower tries to identify the leader with a father-figure who will relieve her of all dilemma and keep off crisis. Especially in the case of India with a huge proportion of people suffering from poverty and hardship, people are highly vulnerable to the influence of such a leaders.

n Dimensions of Social Conflict and Prejudice

Of the many social conflicts that plague Indian society there are four particularly salient dimensions: caste conflict, religious conflict, linguistic conflict and class conflict. Basically caste, religion and language form strong units of identity of Indians. Hence, groups are often formed on the basis of these. Class conflict is not based on membership of any parochial group; rather it is an expression of tension between various economic classes in an industrial economy. With the growth of industries in India, a sizeable working class and many trade unions have been formed. Prejudice and conflict in the context of class is also of our interest, given the fact that good class relations is crucial for peace in an industrialized society.

Caste

In a way, caste has been the most persistent form of social relations in India for centuries. Many changes have occurred in India, but caste is able to resist any attempt to eliminate it. Even today, caste forms an important ethnic identity for any Indian. On the other hand, though caste hasn't gone extinct (as predicted by many scholars), it has changed its character with changing times. If we need to study conflict and prejudices in caste, we should study it in three phases : caste in traditional India, caste in British India and caste in free India.

1. Caste in Traditional India

In traditional India, various castes (jatis) were arranged in the form of a hierarchy. The hierarchy was exploitative in the sense that there was a strict division of labour between various castes. Member of one caste can not perform the job sanctioned to another caste. For example, a member of washerman caste was prohibited from becoming a blacksmith, which only a member of blacksmith caste could become. No prizes to guess which castes performed the neat and valuable jobs. The Brahmin castes and Kshatriya castes were sanctioned to perform various tasks that were considered desirable. The upper castes also had greater control over land, production and capital.

Was there caste conflict in traditional India? Many instances of conflict between Brahmin castes and Kshatriya castes for supremacy are known. But what about conflict between upper castes and lower castes ? Secondly, was there any caste prejudice in traditional society ? Surprisingly, many scholars used to believe that there was none. This is not true. Caste system has always been an exploitative system where lower castes have been discriminated against. Especially the untouchable castes were subject to many discriminations : they couldn't touch anything used by upper castes, they couldn't use any public amenities (like ponds, schools etc.), couldn't own property etc. Now, how can there be discrimination without prejudice ? Discrimination is the behavioural component of prejudice.

Yes, there was prejudice in traditional society but it was *institutionalized prejudice*. There was a widespread belief that various Varnas (there are

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four varnas into which all jatis can be categorized : Brahmin, Kshatriya, Vaishya, Shudra) have come out of various parts of Brahma's body. Brahmins have come out of Brahma's brain, so are the purest and most supreme. Shudra castes have originated from Brahma's feets, so are least pure. In addition, the untouchable castes are polluted. This notion of purity and pollution on which the whole caste system was based in traditional Indian society is itself a prejudice. If you think that you are pure or that some other person is polluted, you are simply prejudiced.

The caste system is a classic case of how prejudices are institutionalized into general values; are passed from one generation to another by socialization, and lead to widespread inter-group discriminatioin. If there was so much prejudice and discrimination, next question is why did it not lead to caste conflict? Many sociologists have explained that inter-caste relations were mired by cooperation and conflict. Caste tensions always existed, but didn't escalate into revolt by lower castes ? Why? Because of cooperation. If you remember Sherif's realistic groups conflict theory, you know that conflict is result of competition. Competition and cooperation are at either ends of a continuum. Conflict among upper and lower castes was low because of cooperation between these castes.

The **Jajmani System** is a system of economic exchange which existed in traditional society between various castes. In this system, Kulin castes (lower castes) used to work for Jajman castes (land owning castes) in return for an assured income. Jajmani System fostered inter-dependence and cooperation. The landlord couldn't till his land without agricultural labourers – The labourers couldn't earn a livelihood without working for landlords. Not just labourers, the washermen, barber, artisans, temple priests etc worked for the landlord with the assurance of a share of the produce. The Jajmani System provided a job security to all Kulin castes; hence cooperation, not competition.

2. Caste in British India

In colonial period, the cooperation of castes slowly changed into competition. First, the Britishers introduced private property and capitalist form of farming. In capitalist farming, landlords hired and fired free labour at will. This led to breakdown of jajmani system. The special relation shared by Jajmans and Kulins broke.

Secondly, British rule opened up new opportunities. Many non-traditional job opportunities came the way of caste people : jobs in army, in modern industries and modern legal profession were opened to all castes. Though upper castes benefited most from these occupations, many lower caste members also benefited; and became prosperous. These, economically prosperous lower caste members desired for a higher status in society.

From above two points, we can make two conclusion : (1) cooperation of jajmani system was turning into competition : competition for modern jobs, and competition for agricultural land, (2) economically prosperous sections of lower castes wanted higher caste status. To get higher caste status, many of these lower castes started emulating the customs of upper castes and demanded higher caste status. For example, suppose the Noniya caste (belonging to Shudra Varna) wants to get Kshatriya status. It starts emulating the customs, rituals and manners of various Kshatriya castes. The Noniya caste also justifies that it is a Kshatriya caste using some mythology to explain why it is so. This

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phenomenon is called **Sanskritization.** Sanskritization was first discovered by eminent sociologist M. N. Srinivas.

Why is Sanskritization significant for us in a psychological study of conflict ? Because it shows that lower castes considered the upper castes as a reference group. If you emulate Shahrukh Khan, evidently Shahrukh Khan is your role model. You want to gain all the popularity and fan base of Shahrukh Khan. It is because you consider the identity of a superstar as more positive than yours. Exactly the same was the situation of lower castes which were sanskritizing. They were emulating the upper castes and claiming upper caste status as they considered the upper caste identity more favourable, and positive than their own identity. This is validated by many research findings. For example, Paranjpe (1970) has found that Harijans had a negative self-image while Brahmins had the most positive self-image. Similarly, Majeed and Ghosh (1981) found that the scheduled castes displayed a strong negative social identity in relation to upper castes.

What was the nature of caste conflict in colonial period? Many sociologists have reported that attempts of lower castes to sanskritize were met with resistance by upper castes. This period also saw many peasant movements (by lower caste peasants) against upper caste landlords. Many of these movements were violent. Political conflict between upper castes and lower castes also became prominent. In Tamil Nadu, a strong anti-Brahmin movement emerged under the leadership of Periyar. This movement was instrumental in creating strong feelings of hostility against Brahmins. In Periyar's ideology, the Brahmins were 'alien Aryans' who were exploiting the Dravidian non-Brahmins. This also created deep-rooted prejudices against Brahmins.

Outside Tamil Nadu, the most vociferous political activist was B. R. Ambedkar. He was instrumental in formation of a 'dalit identity'. However, he was not that successful in mobilizing dalits for political action.

3. Caste in Contemporary India

While discussing Sanskritizatioin, I mentioned how lower castes had a negative self-image during colonial period. This has changed remarkably in post-independence era. Thanks to various social and political movements (prominent being dalit Panther movement, Bahujan Samaj Party: BSP), caste awareness has increased in dalit castes. Today, the Dalits assert their Dalit identity. They no longer see the upper castes as a reference group; nor do they try to sanskritize. Rather, today there is a horizontal solidarity in most castes.

Today, the prejudices based on religion (that some castes are purer because they came out of some parts of Brahma) are becoming irrelevant. But castes are not dying. Rather, caste identity is becoming stronger. There is competition between various castes during election to grab political power. This competition has made caste a pressure group.

Besides competition for political power, there is also competition for economic resources. Caste conflict between upper and lower castes are more frequent in villages where some lower caste members have become prosperous.

Now, let us look into certain patterns in inter-caste prejudice observed in contemporary India :

1. Though caste conflicts have always been between the top and bottom strata, there have been increasingly greater number of conflict between middle castes (OBCs) and

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Harijans (M. P. Singh, 1979).

2. The earlier ambivalence of identity among lower castes, reflected in Sanskritization and religious conversion has been replaced by an aggressive assertion of Dalit identity (M. P. Singh, 1979).
3. Caste identity and prejudices develop in children by 4-6 years of age. For instance, Tiwari and Misra (1980) investigated some primary school students in Faridabad city. The students were quizzed about their caste name, their knowledge of different castes, the caste of their best friends, and the caste of students they find unpleasant. It was found that 75% of children between 4-6 years of age were able to give their own caste names. Also, majority of students sought friendship within their own castes, and avoided making friends from other castes.
4. Studies have found that upper castes are more prejudiced than lower castes, while other studies have found that lower caste members are more prejudiced. I believe that generalization is dangerous. Inter-caste prejudice varies from place to place depending on historical events, persistent conflicts, feeling of being discriminated against etc.

Religion

The problem of prejudice and conflict is not as severe in any other case as it is in the case of religion. One of the major challenges to social integration in India is the challenge of communalism and fundamentalism. Of the many factors behind communal riots, one that is especially prominent is prejudice and mutual suspicion between two major religious groups of India : Hindus and Muslims.

The widespread prejudice between Hindus and Muslims in India has been empirically tested and well documented. For example, Mohsin (1984) studied ethnocentricity and ethnic prejudice among Hindu and Muslim undergraduate and postgraduate students of Patna and Utkal universities. He found strong ethnic prejudices in both Hindus and Muslims. He also makes an interesting observation that the prejudiced attitudes of Hindus and Muslims towards each other have become a part of the social norms as these prejudices are shared by most members of respective communities.

Prejudices between the two communities have practically become so widespread in respective communities that one wonders how could such prejudice develop and get reinforced! Let us look at a few psychologically relevant causal factors :

1. History

False beliefs are an important cognitive component of prejudice. And false beliefs are picked up by an individual from false readings in history. Communal writers of history often give a communal colour to political battles in history. The battles between Akbar and Rana Pratap, or between Aurangzeb and Shivaji are shown as battles between Hindus and Muslims. Hero-myths are created by projecting Rana Pratap, Shivaji and Guru Govind Singh as saviours of Hinduism, and likes of Akbar and Aurangzeb as villains. While its true that Aurangzeb was a religious fanatic, Akbar was one of the greatest secular rulers. It is never pointed out that Muslims fought for Rana Pratap and Shivaji, while Hindus fought for Akbar and Aurangzeb. Ultimately, these were political struggles. These hero-myths help ideologues to justify their ideology (A. K. Singh, 1988). False beliefs about history create strong hostility towards the out-group.

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2. Fear Psychosis

One important factor that generates and reinforces prejudice is fear. Muslims fear of being assimilated by Hinduism like Buddhism and Jainism. Their minority status itself creates fear in their minds. Frequent riots further reinforce the fears. Fear is nothing but an emotion. Such negative emotions further strengthen prejudices.

Hindus, on the other hand, fear that they may become a minority in India. This fear is fuelled by statistics that Muslim population increases at a greater rate than Hindu population. The true explanation for this is that Muslims are relatively poorer economically than Hindus. Hence, fertility rate among Muslims is higher. Yet, the rate is not as high as to turn Hindus into a minority anytime in future. The fear is, at best, irrational.

3. Relative deprivation

As discussed in an earlier section in thischapter, you feel relatively deprived when you compare yourself with a reference group and perceive the reference group as economically better off than you. Muslims often compare their present status with (a) their past history as rulers, (b) Muslims in Islamic nations, and (c) with the Hindu community. Empirical studies have also demonstrated that Muslims who feel highly relatively deprived in relation to other groups have more negative outgroups attitudes than Muslims who do not (Tripathi and Srivastava, 1980).

4. Memories of Past injustices

It is a fact that partition was overwhelmingly supported by Muslims. And memory of the partition of India still lingers in the collective unconscious of Hindu psyche. The partition is perceived as an injustice. Similarly, the images of Babri Masjid being demolished has seeped into the collective unconscious of the Muslims psyche. When provided appropriate cues, such images surface in the consciousness and severely affect the judgments of people.

5. Economic Motives

Many scholars have identified underlying economic motives behind the ideological posturing of various parties involved in a riot.

It is argued that when a few muslims become prosperous, it triggers irrational jealousy and envy among Hindus. This jealousy fuels prejudice. Based on a number of case studies, Engineer (1984) has identified certain common characteristic features of riots, like :

(a) Riots occur in towns where the proportion of Muslims is more than 30%.

(b) A section of Muslims is economically well-off and appear to compete with Hindus.

(c) Core issues are economic or political, triggered by some trivial incident.

(d) Riots are preplanned rather than spontaneous.

From these conclusions, we may deduce that while prejudice plays a role in religious conflict, human motives also play a significant role.

Now we turn our attention to some trends in prejudice seen in Indian research. Some conclusions drawn from various studies of intergroup prejudice in India are :

1. Muslims are more prejudices than Christians, who in turn are more prejudiced than Hindus. (Enayatullah, 1984). It seems that minority status strengthens group identity and ethnocentrism.
2. Prejudice is negatively correlated to religious information(Hassan, 1981). Lesser the religious information more is the prejudice.

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3. Personality variables like authoritarianism are more powerful correlates of prejudice than religious affiliation, caste status or rural-urban origin (Hassan, 1981).
4. Religious prejudice is related to socialization within one's group. Both religious identity and prejudice develops early in childhood because parents and significant others pass on their prejudices to the child. This problem is cyclic because religious prejudices have become a social norm. False beliefs about outgroup get inherited by the child.

Language

Social interaction between various linguistic groups are marred by stereotypes like "Bengalis are clannish", "Marwaris are anaricious", "Andhras are crude" and "Tamils are cunning" (Venkatasubrahmanyan, 1973). In my graduation days (I used to study in a college in Kharagpur, West Bengal), we used to have very negative feelings about Bengalis. Most students in campus believed that Bengalis are narcissists, saw their culture as the best and themselves the centre of the world. Such stereotypes students surprisingly tend to generalize about all Bengalis, irrespective of individual differences.

Linguistic prejudices won't be a social problem, however, if only such stereotypes are held about people following a language. They become a social problem when language becomes the basis of discriminatory treatment. The root cause of conflictual inter-group relations based on language lies in historical events. Hence, we need to discuss these in short.

In the course of preparation of Indian Constitution, it was envisioned that Hindi should become the Lingua Indica in the course of time. This implied that southern states (following Telugu, Tamil, Kannada etc.) had to learn an alien language. This was not acceptable, and southern states vociferously opposed the imposition of Hindi on them.

Though Hindi wasn't imposed and English remained the official language, there was widespread suspicion and fear among Tamils regarding Hindi. Such prejudice has led to antilocution and avoidance of Hindi-speaking population in towns of Tamil Nadu. In the 1960s and early 1970s, the prejudice about Hindu domination was so high that names written in Hindi in public places, railway stations and post offices were erased in Tamil Nadu. In mid 1960s, there was even a clamour fo secession.

Empirical studies have also validated this supposed antipathy towards Hindi among non-Hindi speaking population. For example, Sarma (1964) studied Tamil-speaking and Telugu-speaking students in some colleges in Madras city by using a variant of Bogardus Social Distance Scale. The researcher's aim was to find out the social distance an individual would maintain with various linguistic groups. Sarma found that Hindi-speaking group was put at the bottom of the preferential order (i.e., students wanted to maintain maximum social distance from them). Tamil students placed the Hindi-group at 9th spot while Telugu students placed them at the 10th (last) spot. This type of prejudice exists not just between southerners and Hindi but between any two groups based on language. For example, Rath and Das (1957) studied the attitudes of caste Hindu Oriyas towards Bengalis, Biharis, Andhras, Punjabis, Adivasis and Harijans. It was found that the subjects chose favourable traits for Oriyas, while choosing a large number of derogatory attributes for out-groups.

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Why do prejudices develop based on language ? Since the formation of linguistic states in 1950s, group identity of people following various languages have strengthened. By Tajfel's Social Identity theory, it can be stated that when group identity is strong, group favouritism develops. Since all of us keep making pre-judgments in the face of incomplete evidence, we develop stereotypes about linguistic out-groups.

Another major reason is political. Language is often intrinsically related to one's unique culture and people easily become sentimental about their language. This is harnessed by political leaders to create prejudices about other languages. For example, the Shiv Sena movement and later Maharashtra Navnirman Sena have used the "Marathi Manoos" as a tool for political mobilization. Discrimination and violence against Hindi-speaking immigrants have been lately observed owing to mobilization by political leaders.

n Psychological Strategies for Handling Conflict and Prejudice

Society in India is a multi-cultural, multi-ethnic one in which people are divided on the basis of religion, caste, creed, tribe, ethnicity, race and many other factors. Realistically speaking, it is not possible to obliterate the lines of caste, tribe or religion. Comparing with the American society, we can observe that theirs is a "melting pot" where a single language (English) and a single culture (Pop culture ?) is followed throughout a large country. That can't be the case with India.

However, a sensitization can be brought among citizens about being part of a society. The aim here is to reduce prejudice and conflicts by better understanding of members of out-groups in an individual.

What do the theories of prejudice and conflict tell us ? Before discussing the psychological theories, first let us discuss the economic and political ones. Many economists believe that reduction of poverty and equal access over resources can reduce prejudice. This looks easy theoretically, but practically not immediately possible. Besides, it is not objective deprivation of resources but subjective expectations that lead to competition and conflict. Political approaches advocate the obliteration of boundaries. Conflict develops on the basis of language. So impose a single homogeneous religion/ language, on the whole country. This can happen in a totalitarian form of government. For example, the Chinese government is contemplating a policy to give names to babies so that their ethnic identity is not evident from their names. Such a policy can't be implemented in liberal democratic countries like India. Besides, the Chinese government hasn't been very successful. The forced assimilation of ethnic minorities into the majority Hun is facing violent resistance from Tibetans and Muslim minorities.

Psychological theories have an advantage in that they provide insights into inter-group and interpersonal relations that can be used to develop interventions at school, organization and community levels to reduce prejudice and conflict. Let us evaluate various psychological theories in the light of present discussion. The psychoanalytic school puts excess emphasis on child rearing practices (CRP). Prejudice can be reduced by following appropriate CRP. But

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how far is it practical? We can't force parents to show a definite parenting style. However theories like the realistic group conflict theory provide good directions for interventions. The theory makes it very clear that removing competition and replacing it with superordinate goals and cooperation reduces hostility. We all remember how the Kargil conflict in 1998 between India and Pakistan united all Indians into a we-group. At that time, defence of India was our superordinate goal.

The social identity theory of Tejfel states that group favouritism is natural and inevitable. However, if boundaries between groups can be made more blurred or flexible, then group membership is no longer a central part of social identity.

Psychologists have drawn inspiration from the **game theory** in devising strategies to reduce conflict. In the prisoners' dilemma experiment, various parties tried to find out a possible win-win approach. Conflicts are based on the logic of win-lose. One party has to win and the other has to lose. But psychologists assert that by **negotiation**, a possible solution to conflict can be found out which is a win-win solution.

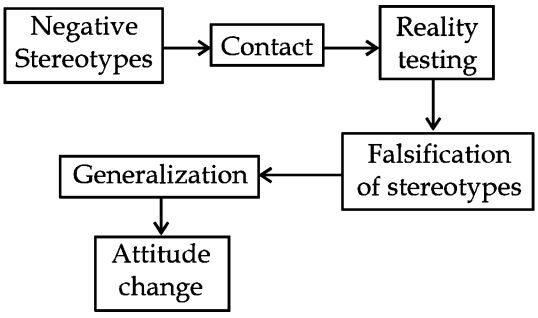
Now let us move on to specific intervention strategies to prevent, reduce and resolve prejudices and conflicts.

Interventions

Before going into the question of 'how ?' in intervention, we need to tackle 'who ?'. It is not possible to introduce interventions for whole societies. Interventions can be produced in an organization (for example, diversity training), or in the local community (for example, use of panchayati, gram sabha or other civil society groups to introduce interventions). However, the best target groups for short-term and small-scale interventions are young children. Their socialization process is underway and they still haven't formed rigid attitudes. Following A. K. Singh (1985), we know that children form a complete ethnocentric identity by 4-5 years of age, and their prejudices become rigid after 8-9 years of age. Hence, intervention should work best in primary schools. A few major intervention strategies are:

1. Contact

Contact has been advocated by Allport (1954) as a means to reduce stereotypes. The logic is that contact helps in reality testing. As a result our negative attitudes, stereotypes and false beliefs get falsified.



Numerous studies have demonstrated the effectiveness of contact in preventing prejudices. However, contact as an intervention strategy can fail if some conditions are not there. For example, the upper castes and lower castes have been in contact from time immemorial (except the untouchable castes). Then why couldn't a Brahmin realize that there was nothing special in him which is absent in other castes ? Hence, the need to fulfil the conditions

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for contact to succeed. These are :

1. Contact should be equal status contact.
2. No competition but cooperation and pursuit of common (superordinate) goals.
3. Intervention should monitor and increase the frequency, duration and meaningfulness of interaction between members of various groups.
4. Institutional support from government employers and teachers is necessary. Contact fails if these agents are not enthusiastic.

The contact between higher castes and lower castes for generations failed because the contact wasn't equal status contact. Upper castes believed that they originated from some superior part of Brahma's body and so had higher status. Their higher status affected their interaction. Another major factor is the frequency, duration, and meaningfulness of contact. I have observed that many students from North-East India come to study in Delhi University. But they stay in their groups and their interaction with others is minimal and limited to academics. This doesn't reduce prejudice, rather may increase prejudices.

Strategies based on above philosophies are :

- **Diversity** should be promoted in schools and colleges. Teachers should be trained to give tasks that encourage cooperation among students. Greater premium must be given to members of minority community, lower caste students, children of single parents, children from different regions etc during admission to nursery classes.
- **Common residential areas** for members of various communities must be encouraged. In all the cities that I have been to, there are certain areas (ghettos ?) where Muslims live in great majority. In other regions, they are conspicuous in their absence. When the state governments announce new housing projects, they should keep some percentage reserved for various ethnic minority communities. In a single housing society, there is opportunity for healthy contact. Also people get to see each other's habits and customs and better appreciate others' cultures. This reduces ethnocentrism.
- **Civil Societies** must be promoted in cities. Political scientist Ashutosh Varshney (2003) studied some cities that were equally prone to riots. He found that some cities experienced far more riots than other. Why ? On comparison, he found that riots are low in cities with strong civil society groups because they act as contacts between various communities. Here, institutional support from government to promote civil society is essential.

2. Superordinate Goals

Setting of superordinate goals has shown positive results as an intervention strategy in schools. Aronson and his coworkers' (1992) **jigsaw method** is an example. They provided some problems for children in schools to work on. However, to solve the problems, special skills of each student of the group needs to be applied. A student may be good at reading but not good at writing precise. Another may be good at summarizing. So give them a task where each one uses her special skill towards fulfilment of superordinate goals. When the students participating in the activity are from diverse background, prejudices reduce.

In organizations, diversity management strategies should include business games that create superordinate goals. Similarly,

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panchayats should be composed of women members and members from SC and ST background. Community activities should include these members. Cooperation fosters understanding.

3. Categorization techniques

Group conflict and group prejudices develop because of categorization of people into groups. Hence, a logical strategy is to restructure mental representations regarding categorization. There are three main strategies to tackle categorization:

1. Recategorization
2. Decategorization
3. Cross-categorization

Recategorization seeks to develop a common identity (for example, "Indian"), rather than many distinct identities. The existence of a shared identity decreases the salience of differences between two groups and highlights the commonalities. In decategorization, interventions try to eliminate group categorizations. Group prejudices develop when we start believing that all members of a group are similar. So train the students to understand that individual differences exist. This is called **individuation.** Train people to perceive an individual as a unique person rather than member of a group.

Problem with recategorization in India is that ethnic differences are significant and salient. Factors like caste and religion are important parts of the self-concept of a person. Decategorization can be effective in Indian context but needs lot of training resources. A strategy which has been found to be especially fruitful in Indian context is **cross-categorization.**

'Crossed categorization refers to the crossing of one dichotomous categorization (A/B), by a second one (X/Y). This means that some people who belong to a group according to one categorization simultaneously belong to another group according to a second categorization'. (Hutnik, 2004). For example, groups are formed by categorization. So an Oriya may categorize all people into two categories – Oriya and non-Oriya. This is a dichotomous categorization. In crossed categorization, you create another dichotomous categorization, say, Indian and non-Indian. Now, the individual doesn't form two groups but four :

- Oriya, Indian
- Oriya, Non-Indian
- Non-Oriya, Indian
- Non-Oriya, Non-Indian

Earlier, a categorization into Oriya and non-Oriya made all non-Oriyas as out-group. After crossed- categorization, non-Oriya Indians aren't an out-group ! Hence, the negative stereotypes against non-Oriya Indians, if any, aren't strong enough.

The effectiveness of cross-categorization has been demonstrated empirically in Indian conditions. Indeed, one of the earliest studies on this was done in India. Sridhara (1984) studied the attitudes of monolingual (Kannada only) and bilingual (Kannada and Tamil) children between the ages of 8 and 10 years. He found that bilingual children perceived fewer differences between Kannada and Tamil people. In another study, Ghosh and Huq (1985) studied prejudices of Bengali Hindu and Bengali Muslim subjects in India and Bangladesh. This study is significant because here language was crossed with religion. The conclusions were also encouraging. Inter group differentiation was found to be low.

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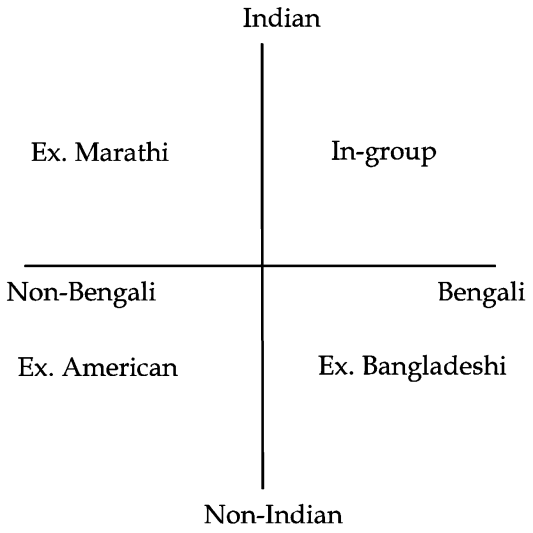

Fig. : Mental representation of Crossed-categorizations

4. Propaganda

Hassan (1981) observes that when a person faces with a dilemma of choosing one of her several dilemmas, she chooses the identity which has greater social respectability. Indians have plural identities, and in interpersonal and intergroup relations, people can 'switch' identities. Naturally, making the 'Indian identity' the strongest identity helps. This can be done by propaganda, and by value education in schools. 'Unity in diversity' was a motto I learnt in school and it has strongly influenced my psyche. I respect the pluralities in Indian society, even while being proud of being an Oriya agnostic ! School curriculum should be drawn keeping this in mind... that plural identities must be respected but Indian identity must be strengthened.

5. Self-Counterconditioning

Many attitudes form by conditioning. Especially prejudices are conditioned by parents and peer groups during socialization. A technique to handle such conditioning is self-counterconditioning, which primarily involves **role-play.** Some suggestions to teachers to use role-play to reduce prejudice have been given by Venkatasubrahmanyan (1973) :

(a) Ask students to collect information that highlights merits of people against whom students have developed prejudices. For example, if a Hindu student believes that all muslims are violent, ask her to collect information about sayings of Prophet Mohammad on peace, on the discourses of Sufi Saints etc. The teacher's praise acts as an operant counter condition to reduce prejudices.

Similarly, the student may be asked to do a project on the merits she has observed in an out-group. Often, we are prejudices against tribals because we don't understand their culture. A study of their culture for a project work or presentation helps her to better understand the culture of out-groups.

(b) Students can be made to play the role of an out-group member in a psycho-drama depicting the outgroup members favourably. For example, a Brahmin prejudiced against Harijans may be asked to play the role of a Harijan who has been discriminated against. Such exercises helps a student to take on the perspective of others.

(c) Books and literature highlighting the merits of the outgroup should be made available in the library and should be incorporated in school curriculum.

(d) Students can be made to participate in group discussions and competitions where they indirectly do role-play by arguing in favour of an outgroup. For example, why do you

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think tribal people lead a more happy life than more civilized ones ? How is their dormitory culture better than ours ? What about their egalitarianism and honesty ?

6. Modelling Influence

One often tries to imitate the actions and feelings of a role model. 'Gandhians' are a group of people who follow the ideals of Gandhi. Such is the power of modelling. No wonder, it is considered an effective strategy to reduce prejudice and conflicts. Venkatasubrahmanyan (1973) has suggested certain strategies to be used by teachers in schools to reduce prejudice :

(a) Some students are very popular and influential in school. Such students often become house leaders or captains in certain activities. They are role models for other students. The teacher can make such popular student leaders play the role of an out-group member in a favourable light. When the student leader is rewarded for playing such roles or doing good deeds (by sympolic rewards like praise or medals), other students get vicarious reinforcement.

(b) **Punishment** of role models is also a strategy. If a prejudiced role model is rebuked and ashamed for her prejudiced views, students get discouraged from expressing their anti-feelings.

(c) **Teachers** are themselves role models for students, and their behaviours and views affect students. Hence, the teachers should be trained to express favourable attitudes towards outgroups.

7. Personal Value Confrontation Technique

Psychological theorists, we have seen, stress on personality factors in prejudice and conflict. We need to account for individual differences in developing prejudice. The authoritarian personality is more vulnerable to join right wing extremist organizations like Bajrang Dal, Rashtriya Swayamsevak Sangh (RSS) and Students' Islamic Movement of India (SIMI), than others. Some interventions can target youths who are influenced by right-wing ideologies. One strategy of targeted intervention that has received good support is the personal value confrontation technique.

In this technique, **cognitive dissonance** is brought about by showing the discrepancy between their attitudes. For example, a radical individual who considers himself a nationalist, and is prejudiced against minorities, can be reasoned that a nationalist stands for his nation. The spirit of the nation is the Constitution of India. The Constitution stands for equality, freedom and human rights. Then how can he commit human rights violation against the minorities? When the attention of authoritarians is drawn towards the incongruity between their personal values, their attitudes tend to improve.

n Measures to Achieve Social Integration

Reduction of prejudice and conflict is necessary but not sufficient condition for social integration or national integration. Of course, categorization techniques and equal status contact foster social integration. But in this section, we will try to understand dynamics of relationship between the majority group and ethnic minorities.

In any society, there is a majority group (Hindu people/Hindi speaking people/non-tribals) and many ethnic minorities (Muslims/Tamils/Tribals). What should be the right policy

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towards minorities ? Broadly, there are four styles to cope with minority status :

1. **Assimilation** : Assimilatory style refers to completely accepting the majority culture (A) while giving up one's original culture, i.e. A + B = A.
2. **Integration** : It refers to a style wherein positive qualities of both cultures are sought. The two cultures (majority and minority) interact to produce a composite culture.
3. **Separation** : Here, the two cultures co-exist in a society but do not interact. The interaction is only superficial.
4. **Marginalization** : In this situation, the minority community doesn't interact with the majority. At the same time, it is marginalized from access to resources to such an extent that it can not maintain its own culture.

Let me give some examples to explain the four concepts above. You must have met some people who say that Hindi is the national language and must be enforced throughout the country. They are assimilationists. They want to impose their culture (language is a part of culture) on non-Hindi speaking population.

Separation is widely visible in Indian cities between Hindus and Muslims. Due to mutual suspicion and prejudice, Hindus stay in Hindu localities and Muslims stay in Muslim localities. Their contact and interaction is superficial. It is said that the rich language Urdu was formed when Persian met Sanskritic languages. There have been great many cultural interaction between Hindus and Muslims in history. But today owing to prejudices and fear of riots, they remain separated.

Marginalization is a problem faced by many tribals. Whenever a new heavy industry is set up in tribal areas, they are displaced. Further, the influx of non-tribals to work in the industries leads to cultural distortion of tribal cultures (which have evolved in isolation). Hence, the tribals stand marginalized.

I explained these terms because you need to understand social integration in the right context. The best strategy to bring about social integration is to respect diversity and cherish commonalities between various groups. The Sri Lankan Government did not respect diversity and imposed Lankan dialect on Tamils. This snowballed into a civil war ! India, on the other hand, respected its linguistic diversity. States were formed on linguistic lines and Hindi was made only a nominal national language. This led to integration !

Hence, important principles of social integration are :

- **Respect diversity**. Do not try to assimilate minorities. Rather stress unity in diversity. Respect the *plural identities* but make the Indian identity the strongest of all identities.
- Encourage cultural interaction and understanding.
- Respect the political and economic rights of minorities, such as tribals. Ascertain equity and fairness in resource allocation to various communities. Establishing industries by displacing tribals gives job benefits to engineers and technicians who will work in those industries, not the tribals. On another note, the extremely low representation of Muslims in government jobs need to be looked into.

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10

Psychology of Terrorism

- Terror Profiling and its criticisms
- The terror organization
- Solution to the problem of terrorism
- Victims of Terrorism

n Psychology of Terrorism

Terrorism has been a subject of intense study in the field of psychology. Yet, there is no consensus about what constitutes terrorism. Terrorism, simply put, is any act of violence against innocent, unarmed civilian. Hence, it can include :

- State sponsored terrorism (Ex. Nazi terror)
- Majority terrorism (Ex. riots)
- Minority terrorism (Ex. bomb blasts, suicide attacks)
- Terrorism supported by external agencies

The focus of psychological study is the terrorist organization, its members and its group dynamics. But before we get into it, we should differentiate between terrorism and secessionism. Please note that my focus here is the kind of terrorism in India sponsored by external agencies – like Naxalite terror, separatism movements of North-East, Punjab issue, Huji and LeT among other organizations. In this perspective, terrorism refers to "the use or threat of violence, by small groups against non-combatants of large groups, for avowed political goals" (Kallen, 1979, p.9). Hence, while secessionism is a goal, terrorism is a means to a goal.

In this chapter, we will look into certain misconceptions in psychological literature regarding the terrorist and go on to study the real nature of terrorist organizations and various group and individual factors involved therein.

Who is a Terrorist ?

In the beginning, psychological studies of terrorism tried to draw up a "psychological profile" of terrorists i.e. a common personality disposition that explains all terrorist acts. Psychologists reasoned that if a person can commit such ghastly acts (killing women and children) without any moral bearing, then he must be **mentally ill**. Further, it was reasoned that terrorists are poor, illiterate and brain-washed; that they come from narcissistic families. However, various terrorist attacks have consistently revealed that many terrorists come from normal families, have stable jobs and a happy, married life. Recently, Mumbai Police

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caught some terrorists who used to work in high-profile software companies and had six-figure pay !

The mental illness explanation has been discredited today. Most modern day terrorists are highly literate and are mentally healthy. That is the reason why they easily get mixed up in crowds. Hence, Nimmi Hutnik(2004) reasons that the search for a "terrorist personality" has been somewhat useless. This is because, she argues, 'terrorism is essentially a group phenomenon. Terrorist organization are not just aggregates of separate individuals; they are groups that exact stringent conformity, hold a common set of norms and values, offer lucrative rewards, and mete out heavy punishments'. It can be confidently concluded, that terrorists represent a **psychologically heterogenous** population. Various factors, including psychopathology, are responsible for terrorism; but no single factor alone is necessary or sufficient for terrorism.

Terrorists are ordinary people. How can ordinary people perform such deeds ?

If terrorists are ordinary people, a second question is : how can ordinary people do such acts ? It is tough for us to believe when we read news reports that software engineers or students might have conducted acts of violence. Many find it so unbelievable that they accuse the police of fabricating innocents as terrorists !

That ordinary people can perform evil deeds under the right circumstances has been validated by two classic studies of social psychology: Milgram (1974) and Zimbardo (1972).

These two studies show that even if an individual views an activity as morally wrong, he may indulge in it. Stanley Milgram (1974), a Yale university psychologist, showed that obedience to authority relieves many people of moral responsibility, thus making them more likely to behave cruelly towards others. Milgram recruited subjects through advertisements in a local newspaper for a "Study in Memory". He instructed the participants to quiz an individual (his accomplice) on a task of memory. If the individual gives wrong answers, the participant should give him/her electric shocks. The shocks were not real but the accomplice acted as if he suffered from shock. Milgram found that many participants easily applied high shocks for minor errors in memory recall!

'Milgram's study clearly demonstrates that, under certain circumstances, the tendency to obey an authority figure is very strong, even when causing harm to an innocent person. This may explain why terrorists who sacrifice themselves through suicide bombs are vulnerable to the command of those perceived as authority figures in a terrorist cell. The masterminds of terror operations may have significantly social authority and influence over their followers, and often a simple request is all that is necessary for a terrorist act' (Zillmer, 2006).

In another experiment, Philip Zimbardo (1972) asked a group of ordinary college students to spend time in a simulated prison. Some were randomly given the duty of guards and were given uniforms. They were instructed to enforce certain rules. The remainder became prisoners, were locked in cells and were asked to wear humiliating outfits. Zimbardo observed that after some time, the simulation became very real, as guards became cruel and devised degrading routines. From this study, we know that once someone is assimilated into a terror cell, it becomes easy to take on the role of a terrorist.

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The Terrorist Organization

The research literature regarding psychology of terrorism is small in quantity; there have been practically no study on terrorism in Indian psychological studies. This may be because of the fact that terrorists are elusive figures. Psychologists don't usually have access to terror organizations. Yet, some studies on imprisoned terrorists have helped us to understand some basics regarding the terror groups. Here, I seek to focus on the terrorist organization than the terrorist because, as contended earlier, terrorism is a group phenomena. The dynamics of these organizations can be studied as under :

1. Recruitment
2. Group Dynamics
3. Motivational processes
4. Decision making
5. Attrition and rebellion

1. Recruitment

Although terror recruits come from a psychologically heterogenous background, there are a few conditions that motivate an individual to join a terrorist group. Zillmer(2006) argues that there are some pre-requisites that lead an individual towards terrorism.

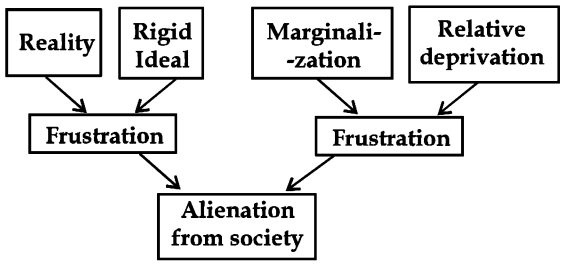
Many studies conducted on terrorists in jails of Israel and USA have revealed that terrorists are frustrated and disillusioned with society. There may be many reasons for disillusionment ...many well-educated, intellectual students resort to terrorism. Zillmer explains that these studens have a rigid ideal. When faced with reality, they get frustrated. For example, who join naxalite movements ? Many members of naxalite forces are rural peasants and tribals, but many city-based educated students participated in it. These students have a rigid view of the world; they rigidly follow an ideology based on some interpretation of Marxism finding that reality is more imperfect than the 'communist utopia' promised by Marx, many of these students join Maxalite movements. Same is the case with many radicalized Islamic students. They have a fundamentalist belief in a utopia that can be achieved only by jehad with non-believers (those who don't believe in their faith).

Typically, terrorist movements have two types of members :

1. Proactive
2. Reactive

Let me explain this with the example of naxalite movement. **Proactive members** are the leaders, who set the ideology of the movement; it has been found that they use hi-tech laptops in their operations against various state police forces! **Reactive members** are the followers, mostly drawn from lower castes and tribals dissatisfied with government's high-handedness.

Individuals from low socio-economic status (SES) groups often feel relatively deprived. Specifically the unemployed youth feel marginalized. Many sociological studies have shown that Muslim youth in India feel frustrated from mainstream due to their lower SES.



Now, why would these frustrated individuals join a terrorist group? These frustrated youths are alienated from society. They don't have a strong status in mainstream groups. For them,

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the terrorist organization becomes a peer group. In the group, their social esteem is high. In India, many peer groups of unemployed youths from ethnic minority communities feel alienated from mainstream due to various socio-economic reasons. These groups are picked by **terror cells** of external agencies like ISI and Harkat-e-Mujahideen (HeM) that give their life a meaning.

2. Group Dynamics

The terror network of an organization may be vast, but various terror cells are small groups where intense, face-to-face interaction happens. This results in strong group solidarity. Due to group solidarity, **group identity** becomes more important than **self identity**. The individual's personal attitudes become irrelevant, he is ready for self-sacrifice for group cause. This partly explains suicide bombings ?

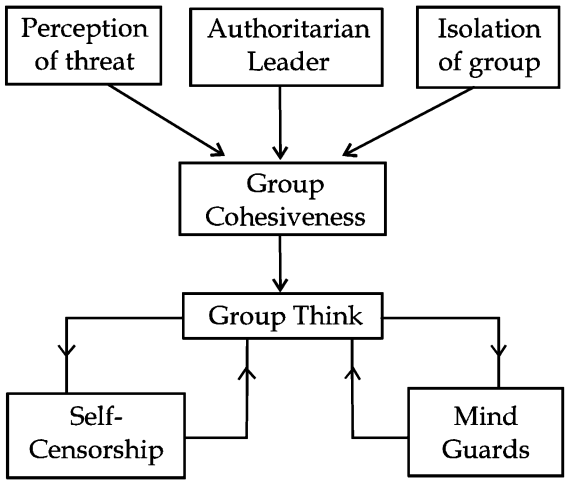
3. Motivational Processes

The terrorist organization fulfils various needs of the individual. Group goal provides a meaning to the life of individuals alienated from society. In a literature survey, Hutnik(2004) has observed that beyond material rewards (terrorism is a major employer in Pakistan !) there are emotional, social and cognitive rewards also:

- Common hatred of a common enemy is a strongly shared **emotional need**.
- The group acts as a substitute for family and fulfils **need for love and affection**.
- The individual's sense of self righteousness fulfils **cognitive needs** and enhances self-esteem.
- Media attention serves as an important reinforcement for **need for power**.

4. Decision Making

In terrorist organizations, members move towards greater extremes of behaviour and ideology. Why the extremism ? This tendency is called **risky shift phenomenon. Group think** takes place due to various reasons represented in the following diagram :



All the above factors are satisfied by a terror group. The leader is often radical and authoritarian; the group operates covertly and is often isolated. Further, group cohesiveness ensures that members self-censor any opposition they have to decisions taken. Due to this, decision taken tend to be extremist in nature. Even a non-terrorist group with common anti-national ideology may become terrorist group because of risky shift.

5. Attrition and Rebellion

The terrorist organization is an organization which doesn't have an exit policy for its employees! There are strong group norms against any form of rebellion. Post(2007) argues that if anyone leaves, it is upsetting to others. Also, defection can set a trend. Hence, those

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who leave the organization are pursued by their former companions. This makes the effort of government to induce them to surrender and rehabilitate more challenging.

Personality Dynamics

Today there is a consensus among scholars that terrorism can be best understood by group factors rather than individual factors. Yet, the *personality pathology thesis* is still adhered to by a few scholars. Presently, the most fashionable versions of this thesis are neo-Freudian theories – specifically the contributions of Post (1984).

Though this thesis may not be completely correct, it may be able to answer a few questions. Who are more vulnerable to becoming terrorists? Take the hypothetical condition of two individuals in same situation. One joins a terror organization and another doesn't. Why? This thesis suitably explains the differences.

The essence of neo-Freudian explanations is that narcissistic wounds at an early age splits the self into two parts :

(a) A grandiose "me" and

(b) A hated and devalued "not me".

The second self is projected onto specific outside targets, which are blamed and hence become scapegoats. A modification to this thesis was made by Post. Post identified two types of inner dynamics : "Nationalist-Separatist" terrorists are loyal to their parents, who reject the government, they carry out terror mission to take revenge from the government which wounded their parents. The "anarchic-ideologues" are disloyal to their parents, who are identified with the state.

An alternate explanation is in terms of Adorno's authoritarian personality (Adorno et al., 1950). Due to punitive child rearing practices and authoritarian parenting style, children develop a rigid personality when they grow up. They consciously love and respect their parents but unconsciously are hostile to them. They project the unconscious hostility as hatred towards weaker sections. Hence, they are intolerant to ambiguity and show excessive conformity and submission to authority.

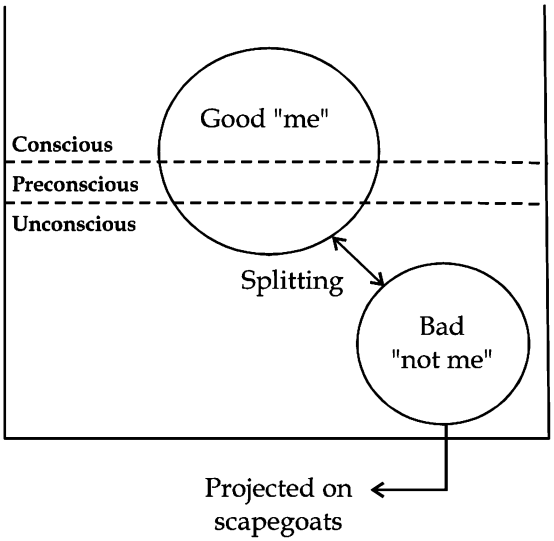

Fig : Pictorial Representation of Split Psyche

n Solution to the Problem of Terrorism

There are three major kinds of terrorism affecting the Indian nation : majority terrorism, minority terrorism and externally-sponsored terrorism. Majority terrorism includes ethnic and communal conflicts; these are mostly political problems and can be resolved by political will. What about minority terrorism ? Few active minority terrorist groups are SIMI, Indian Mujahideen, Nationalist Socialist Council of Nagaland (NSCN), United Liberation Front of Assam (ULFA) etc. Right wing political forces

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are extremely critical of these groups; they advocate summary ban on these organizations and also repressive laws like Prevention of Terrorism Act (POTA). How far are these effective? From a psychological perspective, rather than reduce terrorism, repressive laws can aggravate terrorism.

Tough terror laws work on the principle of *theory of deterrence*. This theory presupposes that the perpetrator will carry out a rational cost benefit analysis before engaging in the terror act: if the costs (severe punishments) outweigh the benefits (gain from crime), the terrorist will resist. This is based on *normative models* of decision making. This deterrence model however fails to stop terrorist acts because these are crimes of passion or ideology. "Suicide bombers", or Jehadis do not make rational calculations before carrying out attacks. The theory of deterrence simply fails to understand human irrationality.

Confrontation vs. Negotiation

Applying the norm-violation theory of deRidder and Tripathi (1997), it can be said that if group-A (Police) break the norms of group-B (terrorist organization) by repression and brutality, group-B would be hurt and further be motivated to break the norms of group-A, by causing law and order problems (For the theory in detail, see the chapter on prejudices and social integration). Hence, confrontation is not a long-term solution. Terrorists would keep rebouncing; worse, they would use more innovative means to attack and create terror if repression is used. Hence, POTA is a not a solution. So, what are the strategies that can be used to remove terrorism ?

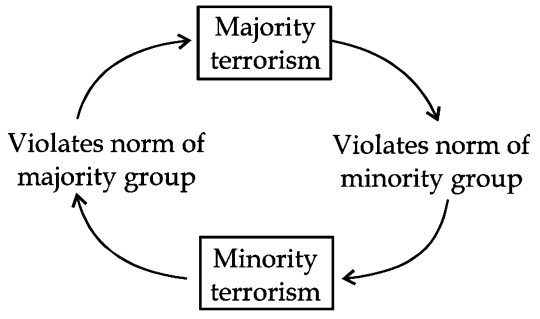
1. Negotiation :

Negotiation is the best tool to increase understanding between two groups (here, the state and terrorist groups). Negotiations have been effectively used in co-option of many terrorist groups. For instance, many terror groups in North-East India that demanded freedom and a separate state have given up their terrorist methods after negotiations. The Bodo Autonomous Council as a solution to the Bodoland problem is an illustration. Negotiation with terror source countries like Pakistan and Bangladesh are also yielding slow but positive results.

Why does negotiation succeed ? It succeeds because it helps reduce the prejudices of two sides, and subsequently fosters understanding. The hatred of terrorist organizations and the activities of terror funding countries are a result of prejudices about the Indian state. For example, many neighbouring countries perceive India as a huge country that can be a security threat anytime in the future.

2. Controlling Majority Terrorism :

A major reason for minority terrorism in India is majority terrorism in the form of riots. Majority terrorism acts create a fear psychosis, that is, insecurity and hopelessness among minority groups. Some individuals from these groups have psychic wounds which they project on the Indian state. In line with the norm violation theory, it can be said that :



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It is tough to suppress minority terrorism, which is covert. But majority terrorism is often politically motivated and can be stopped by police reforms and appropriate delivery of justice system.

3. Value Education :

A very effective intervention is school education of **peace** and **non-violence**; and inculcation of a sense of nationhood. National integration can be best achieved by inculcating values regarding useful citizenship and tolerance.

It has been seen that of late many terrorists caught are young, college going students. They are basically fished young by ideologues and brain-washed. Hence, training in *reflexive thinking* and *sensitization to community* are useful means to combat terrorism.

Intervention strategy in high schools and colleges must concentrate on inculcating realistic ideals. Many terror recruits are disillusioned youths. These educated youths usually have unrealistic and rigid ideologies, as a result of which they feel disillusioned, when faced with reality. For instance, main leaders of the naxalite terror attacks are educated students who hold the Marxian vision of a 'utopia', however impractical it may be. Their acceptance of Marxist ideology is rigid and their goals are unrealistic. Setting of realistic ideals and a pragmatic world-view by teachers of social sciences is necessary.

4. Targeted interventions :

All members of a terrorist group don't have similar personality; there is no "terrorist personality". However, terrorists can be broadly divided as :

(a) Proactive

(b) Reactive

Proactive terrorists are those who have a misplaced sense of righteousness and rigid ideologies. They become leaders, mobilizing people on the lines of their ideology. Reactive terrorists, on the other hand, turn to terrorism to avenge for some perceived harm done by society. They are usually the followers and commit the ground-zero terror acts. For the proactive terrorists, a preventive step is not to let them become terrorists. Usually, these ideologues first become members of some ideological organization before moving over to terrorism. When they are members of such ideological organizations (such as SIMI, RSS, VHP, CPI youth wings etc), they can be targeted by showing the *discrepancy between their basic belief in compassion and humanity and their prejudiced attitude* towards the state or society.

For the reactive terrorists, a preventive step is: those individuals who have been orphaned by riots, or have suffered due to some violent acts can be targeted for **rehabilitation**. The aim here is to heal for rehabilitation. The aim here is to heal past wounds and to reintegrate to mainstream society. Inability on our part to do this marginalizes them and they find solace in being part of a terror group, and targeting their psychic wounds towards the government.

5. GRIT :

Osgood's(1962) theory of Graduated and Reciprocated Initiatives in Tension Reduction (GRIT) states that if a nation makes some unambiguous peaceful gestures, the adversary is likely to reciprocate. This is the logic behind goodwill gestures like unilateral ceasefire by Indian army in Kashmir valley every year during Ramzan. A problem with this approach is that the adversary in modern Islamic terrorism is faceless; how can one negotiate GRIT with them?

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6. Psychoanalytic methods :

Psychoanalysts believe that the cause for terrorist activities can be attributed to the individual terrorist's personality. This makes it nearly impossible to apply this method to remove terrorism. Insight therapy can be done on a captured terrorist to rehabilitate him, but not on an individual prone to join a terrorist group.

Celebrated psychoanalyst Sudhir Kakar, however, gives some suggestions (Times of India, 02-10-2008). He states that violence is justified by our community and hence internalized by us. He states that two qualities that we encourage in our children also encourage violence :

1. Moral idealism
2. High self-esteem

Idealism is dangerous because 'it is inevitably accompanied by the belief that the end justifies the means. If you are fighting for God, for the oppressed or for your religious community, then what matters is the outcome, not the process'. Hence, you don't hesitate to take to terrorism.

Kakar forwards a long-term strategy to deal with violence. In the long term, 'we need to focus our educational efforts on emphasizing the value of compassion, of which fairness and tolerance are important constituents, ... compassion is as national as violence we now know from experiments using brain imaging that watching the suffering of someone who appears to be a victim of violence, activates a similar "pain network" in our brains ....'. Hence, educational institutions should focus on means rather than ends in giving moral education. From Kakar, we learn that morality can be harmful as it justifies ends. Further, moral idealism leads to a rigidity of opinion that legitimizes any means (including terror) to reach at goals.

7. Rehabilitation :

Many recruits of terrorist organizations happen to be juveniles who are the product of broken homes or deprived environments. Juveniles with broken homes or with no home at all seek for a small group and strongly identify with their small group. According to Tajfel's social identity theory (see chapter on prejudices), it is natural to boost the positives of one's own small group. If this small group (i.e. peer group) is picked up by a terror network, the individual naturally accepts terrorism, and finds some justification. Hence, there is a need to rehabilitate juveniles facing social problems in childhood.

n Victims of Terror

(Source : "Terror Anxiety cases up by 50% : Psychiatrist" in Times of India, 07-10-2008).

Terror attacks are unpredictable events that lead to acute stress. The victim – whether injured or not – has low control over the event and experiences low self-efficacy. The victim relives the experience again and again in her head even after the blast. Even if a victim has just heard the blast, it can lead to post-traumatic stress disorder (PTSD). Old persons and children are especially the victims for whom psychological problems are high. The very thought of another attack creates a sense of uncertainty and helplessness. Nightmares, fear of market places, loss of appetite and reclusive behaviour are some symptoms that the individual suffers from **terror trauma.**

Some of the symptoms can be systematically presented as :

- Bad dreams
- Hearing blasts even when there is no blast

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- Loss of appetite
- Disturbed sleep
- Reclusive behaviour
- Conflict with family and friends

To cope with terror trauma, five steps are suggested :

1. **Talk.** Voicing fears and listening to others' fears helps in release of internal panic.
2. **Be vigilant of surroundings.** This helps control the sense of helplessness.
3. **Maintain routine,** especially with children and adults.
4. **Limit exposure** to repeated news and discussions of violence.
5. **Consult a psychologist,** but only if symptoms persist or aggravate.

Expert reason that in terror trauma, family support is more important than professional help. Professional help must be sought only if the trauma persists or aggravates. Family members must ensure that the individual is not overwhelmed by the environment and must be made to feel secure.

Generalized Anxiety

Till a few years ago, trauma was limited to the affected. But now the impact of terror images have seeped into the general public's subconscious, reasons Dr. Avdesh Sharma. For instance, in a recent event, many died because of stampede in a temple. The stampede happened because of a rumour that bombs were planted in the temple, leading to panic in the crowd. This shows the **generalized fear psychosis** that people are going through due to terrorist attacks.

Note : More angles are discussed under the heading 'rehabilitation of victims of violence' in the chapter on rehabilitation psychology.

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11 Psychology of Gender

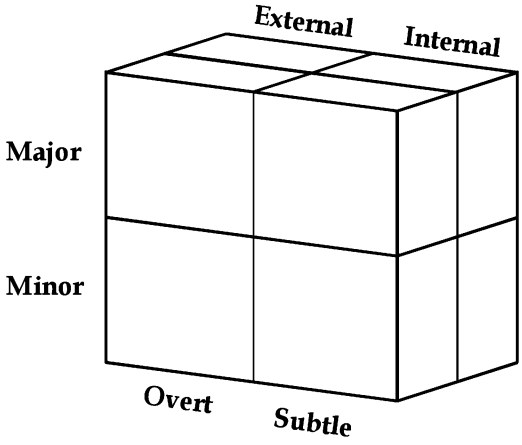
- Issues of Discrimination
- Glass - Ceiling
- Diversity management
- Women in Indian Society

n Issues of Discrimination

Prejudice is an extreme attitude, often negative. Discrimination is the behavioural component of prejudice, the cognitive component being stereotype and the affective component manifesting itself in sexism. Allport (1954) proposed that the behavioural component of prejudice varies from minor to major forms of discrimination. He has talked about five stages in the continuum from minor behavioural discrimination to major ones :

1. Antilocution : Hostile talk, verbal denigration, sexist jokes etc.
2. Avoidance : Keeping a distance, but not actively inflicting harm.
3. Discrimination : Exclusion from education and work etc.
4. Physical attack : Violence against women.
5. Extermination, which isn't applicable in case of gender discrimination.

The issues of gender discrimination are multi-dimensional. Though Allport's classification provides a guideline, it is not enough to explain the whole gamut of discrimination against the female gender. Ruth E. Fassinger (2008) argues that there are three dimensions of discrimination, which together can be represented as under :



I will discuss issues of discrimination in terms of above three axes.

Overt and Subtle Discrimination

Sexist events exist on a continuum that range from subtle to blatant. **Blatant**, or overt sex discrimination has been defined by Benokraitis (1997) as unequal and harmful behaviour towards women that is intentional, unambiguous and visible. It includes a range of

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behaviour like job discrimination, differential salary, sexual harassment and physical violence. For instance, it has been found that there is a 'gap' in average pay of male and female employees doing the same job. Even jobs are categorized according to gender and are based upon society's stereotypes about who should become a manager and who should become a nurse. Unfortunately, the jobs that carry a female stereotype (like secretary, nurse etc.) are low-paying than those that are associated with male stereotypes (shopfloor engineers, managers etc).

Sexual harassment is another form of overt discrimination with grave implications. Asking for sexual favours, touching and playing with women's sexual organs are certain forms that this discrimination can take. It is not only unethical but also may lead to *demoralization* and *decreased self-esteem* in women.

On the other end are **subtle sexist behaviours**. Subtle sexism includes behaviours like sexist jokes that denigrade women. It is often believed that such remarks and jokes are harmless, but research has shown that women are negatively affected by sexist humour (La France and Woodzicka, 1998). Benokraitis (1997) reasons that sexist jokes put women in a difficult situation where they have to choose between whether to laugh so as not to offend colleagues and superiors, or not to laugh and be seen as humourless. Another example of subtle sexism is gender discrimination in the classroom.

External-Internal discrimination

External discrimination refers to external barriers and discriminatory behaviours. Internal discrimination, on the other hand, refers to discriminatory attitudes that have been internalized by women. For instance, take the case of Sati death of Roop Kanwar in the 1980s. Sati was dignified by society to such an extent that she internalized the belief and voluntarily decided to burn with her husband's body. Similarly, you must have observed that many bollywood songs contain the word "baby" for women. In general, women are typified as "item", "hot", and to use the local word "maal". This is basically objectification of women's body. Women internalize this objectification, form an **objectified body consciousness** and accordingly are obliged to look good. In some offices, sexual harassment in the form of touching female sexual harassment is internalized by women. Though their self-concept is hurt and self-esteem takes a beating, women suffers all this without complaint.

The worst form of internalization is the ***internalization of cultural devaluation of women.*** This often happens during socialization. Parents use reinforcements and punishments to reinforce sex-role stereotypes; at the same time the cultural devaluation of girls, widely prevalent in patriarchal societies like India, are also internalized. The major problem with internalization of discrimination is that women can't even resist the discriminatory treatment. She sees the discrimination as legitimate.

Major and Minor Discrimination

Let us take two organizations. In one, no training facilities are available to women, nor are they put in responsible posts. In another, all this is theoretically available but the women aren't encouraged to take advantage of training facilities. The discrimination in the first case is a major one while in the second case it is a minor one. Both forms of discrimination have effect on women. In deed, the effect on women can be quite similar. For example, if girls in a village aren't allowed to study in schools, it is a major form of discrimination. On the other hand, if they are allowed to attend school but there is no encouragement to excel, effectively their self-efficacy and expectancy are low. As a result, they don't perform well. This is a minor form of discrimination, with similar effects as the major form.

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n Glass Ceiling

In most modern organizations, the company policy advocates gender equity in recruitment and promotions. Theoretically, any woman employee can get to the top. This is also good for the organization, because the most deserving of employees should rise to the top; this improves productivity. However, the situation, it seems, is different in practice. Only about 15% of the corporate officers of Fortune 500 companies are women and only six are CEOs. Why this discrepancy? There are two possible explanations.

One that women are less capable to be at the top and lead. Second possibility is that there is an invisible barrier that prevents them from moving up. The first possibility has been proved wrong. Yes, women differ in terms of leadership styles. Eagly and Johnson (1990) reason that men and women can lead equally effectively; they only differ in terms of how they lead. Women managers are more interpersonally oriented, less autocratic and more participative. Yet, they are no less effective in leading.

Hence, the only explanation for low representation of women at the top is the existence of an invisible barrier, a glass ceiling above which women couldn't rise. It is a glass ceiling because the reasons for the barrier aren't visible but psychological (invisible). Psychologists have found various factors in organizations that restrict the rise of deserving women to the top. These can be studied as :

1. Stereotypes about women
2. Sex discrimination in the workplace
3. Informal Networks
4. Women's personal constraints

Fig : Elements of workplace that build up the glass ceiling

Sex role stereotypes are formed because of cultural factors. Many stereotypes are internalized by individuals at the time of socialization. Media also plays a role in creating stereotypes of women mostly as mothers and wives. Some day, check the advertisements on television. You will find that most women represented in the ads are mothers or wives. Occasionally, a doctor or a personal secretary may be women. Women professionals are under-represented in the media. These stereotypes have a huge impact on how women are treated in the workplace.

For example, Eagly et al(2002) have found from a meta-analysis that women who exhibit a more masculine style are perceived as less effective than women who use a feminine style. Also women who use a feminine style are seen as less effective than men who exhibit a

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masculine style! In a leaderless group consisting of both men and women, a man tends to emerge as the leader.

These stereotypes discourage women from rising in two ways :

1. Success in job performance of women is **attributed** to luck instead of ability (Ragins and Sundstrom, 1989).
2. Self-fulfilling prophecy that women can't perform a job efficiently makes women feel low on self-efficacy. This leads to decreased performance and reinforces the prophecy and prejudices.

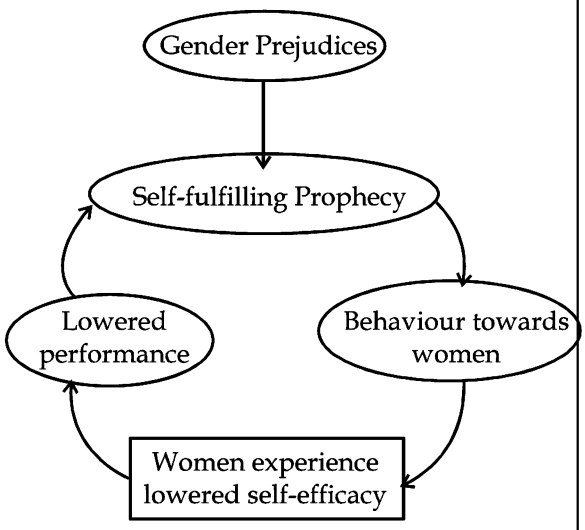

Fig. : Dynamics of Self-fulfilling prophecy against women.

Stereotypes also leads to sexual discrimination in the workplace. Many-a-times, managers don't realize that they are discriminating as the discrimination is subtle in form. For example, during a job recruitment the interviewers make a perception about the candidate from his/her biodata. In the face of limited information, biodata of women are screened out. Herriot(1989) reasons that unstructured interviews are prone to sex bias as the interviewers are often male and are most likely to engage in a comfortable chat with male candidates. Training is an integral part of resource development. Even here, male employees are preferred. As a result, many female employees can't get exposure to managerial skills. Horgan (1989) opines that two underlying reasons explain why women continue to be largely unsuccessful in organizations : it is much more difficult for women to gain managerial expertise; and most women's managerial experience has to be evaluated for sex appropriateness.

Ambiguous **role expectations** from women also reduce their performance at work. For instance, Morrison et al. (1987) reported from their research that contradictory expectations from women often derail their career. They are expected to be tough but not "macho"; to be ambitious but not to expect equal treatment !

Verma and Stroh (2001) make an interesting observation that male supervisions tend to rate their male subordinates higher than their female sub-ordinates, while female supervisors tend to rate female sub-ordinates higher. Given that most managers at the top are male, only males are recruited to the top. This becomes a self-sustaining and self-reinforcing system.

Informal Networks

Many personal bonds are formed in the informal office networks. These are usually male only groups. Men are comfortable in talking to men in informal groups; this keeps out the

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women. As a result, they are deprived of personal bonds formed between the boss and subordinates. Former IPS officer Kiran Bedi went on record stating that she could not become Director General of Delhi Police because she did not have any "booze friends". This shows the importance of informal networks.

Women's Personal Life

There are certain factors in the female employee's family that restrict her performance in the workplace. Women are expected to balance their home and work life. This creates role conflict and high stress which affects women's performance at work. Role conflict is exacerbated by the inflexible attitudes of parents-in-law and unsupportive behaviour of the husband (Rani, 1976). Even employers are not sensitive to these problems. Generally, employers are not favourably disposed to working mothers. Hasan (1981) has revealed from a study that male administrators prefer to employ women who have no children. Freidman (1988) observes that women who have succeeded to break the glass ceiling have made more personal sacrifice and have had to experience greater psychological conflict and stress.

n Diversity Management

Diversity management is a managerial concept that believes that the organization can take certain proactive steps to break the glass ceiling and reduce discrimination against women and minority ethnic communities. In this section, we will concentrate on gender issues only. The biggest challenge in shattering the glass ceiling and bringing about gender equity is that companies don't usually realize that the glass-ceiling exists. Since most of the discrimination is subtle and owing to psychological factors, these are not easily recognized. Once recognized, the best way to deal with them is to directly address the issues of discrimination. Some of the initiatives that corporations have successfully taken are :-

1. **Recruitment** : Unstructured interviews are quite subjective in nature and often tend to show sexist biases (Herriot, 1989). So a better alternative is to take structured interview.
2. **Work culture** : To make the work environment more conducive to women, it needs to be changed. Work culture can be effectively changed by undertaking socialization training programmes like diversity awareness training and harassment training. Diversity training programs teach people to 'confront personal prejudices that could lead to discriminating behaviours. Through lectures, videos, role playing, and confrontational exercises, employees are learning, in a way, how it might feel to be a female worker being sexually harassed by a male boss... Trainees are forced to deal with their own sexist and racist attitudes, and to learn to be more sensitive to the concerns and viewpoints of others' (Schultz and Schultz, 2002, p. 180).
3. **Glass ceiling** is best dealt with when it is recognized and directly attacked. Hence, steps like tracking of progress and appraisal by managers should be taken. Wirth (2001) is of the opinion that career tracking identifies women with high potential and helps them gain visibility and experience. These high potential women are exposed to special leadership development jobs and training to facilitate their rise to the top. Parikh and

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Shah (1994) have studied 500 women in the management sector. They found that the attitude of the top management and the visibility of senior women professionals as role models were crucial for the growth of women employees.

4. **Women's Network** in the workplace must be encouraged. Assignment of mentor is a significant step in enhancing women's position in the workplace. The availability of mentors has been directly linked to higher pay and greater career growth (Karen, 1985). Organizations must, hence, try to formalize women's networks and mentorship programmes.
5. **Reducing Role-Conflict** : Substantial research has shown that an effective way to break the glass ceiling is by helping female employees better balance work and family responsibilities. Maternity leave, flexible work arrangements, telecommuting and flexitime are some measures the organization can take to reduce role-conflict in women.

n Women and Indian Society

The Cultural construction of Indian Womanhood

Sex is only biological different between men and women. Gender, on the other hand, is cultural difference; gender differences are cultivated and propagated by the culture and need not reflect actual, objective difference between men and women. No wonder, the social construction of women varies from society to society. This section discusses various social constructions of gender in Indian society. We will discuss about the feminine identity, psychological well-being and mental health in women, sex role stereotypes, work life of women and then move on to understand discrimination against women in Indian society all through the developmental life span.

The dominant Hindu culture in India is polytheistic and believes in a plurality of Gods and Goddesses. Unlike the monotheistic religions of Christianity and Judaism, the cultural construction of Hindu culture includes the construction of strong, powerful Goddesses like Durga, Kali, Laxmi and Shakti. If such females are the objects of worship and veneration of a cultural community, 'it is logical to expect that women in general would benefit by sharing that elevated status. It may even be assumed that the widespread acceptance and valuerisation of positive constructions of feminity in goddess figures serve as enabling models for women and for men in their treatment of women in real life. It may also be assumed that the autonomous constructions of female divinity such as Kali, Durga and their many spin offs respresentative of Stri-Shakti (woman power) may supplement or challenge the equally widely prevalent models of female meekness, subordination and obedience' (U. Vindhya, 2005) that are characteristics of the *Pativrata* ideal.

But no, this is not the case. While a duality in construction of Goddesses exist (between Shakti, Kali and Durga on one hand and Sita, Savitri and Anasuya on the other) this is not reflected in the construction of feminine identity. The construction of the Indian woman lies solely on the concept of **Pativrata**, with Sita as the ego ideal (Kakar, 1981). Also, the cultural burden of morality (purity, virtue, chastity, self-sacrifice etc.) on women is more severe for women than men. The woman's sexuality in India is considered something to be kept under control. This is the reason why girls are supposed to be married away before they reach puberty; and widows were, at one time, coerced to commit Sati by jumping into their husband's burning pyre.

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The Feminine Identity in India

To analyze the female identity in India, we shall borrow from Jungian concepts. Carl Jung (1954) had reasoned that every individual has a **collective unconscious** that he/she inherits from his/her ancestors. The collective unconscious is expressed in the form of archetypal symbols like fear of darkness, good and bad, mother etc. (these symbols automatically develop in our unconscious because we have inherited these). Jung reasons that there is a collective female aspect in every male's unconscious - called **anima**; and a collective male aspect in every female's unconscious - called **animus**. Hence, the identity of any woman consists of her feminine self and her masculine self (animus). A healthy, unified self develops when both masculine and feminine self are integrated. In an ideal socialization process, the daughter is given the freedom to show both feminine and masculine behaviour. But what happens in India ?

In Indian culture, women are supposed to rigorously follow the **Pativrata ideal**, due to which their feminine self is promoted and their masculine self is suppressed. You must have observed that in you class, there are certain girls who behave like boys. They are discouraged to do so. As a result, they are unable to integrate their selves into a unified one. For a girl with a strong feminity and weak masculine nature, this doesn't pose much health problems. But for girls with strong masculine tendencies, this leads to a **fragmental psyche** and mental health problems.

Sex Stereotypes and Sex Roles

Many studies have tried to picture various sex stereotypes prevalent in Indian society. For instance, Sethi and Allen (1988) have compared sex stereotypes in USA and India using a psychological test called Bem Sex Role Inventory (BSRI). They found that in Indian society, **instrumental traits** such as *aggression* and *competitiveness* were preferred in men and **expressive traits** like *warmth* and *affection* were preferred in women. However, they found certain traits which were gender-specific in USA but were desired of both genders in India. These include *family-related traits* like being obliged to the elderly and showing loyalty to family; and **assertive traits**. The findings that assertive traits were desired in both men and women was counter-intuitive; Sethi and Allen reason that this implies the subtle strength of Indian women who can be quite assertive when dealing with men.

While Sethi and Allen had used the BSRI, others like Sripat (1989) and Bharat (1994) studied sex-role stereotypes by asking open-ended questions to the respondents : "What are the qualities you desire/or do not desire in an Indian woman ?" Sripat wanted to find out if there have been any change in sex-role stereotypes owing to urbanization, industrialization and constitutional changes. He found that though more progressive (modern) values were desired in Indian women yet the traditional ones continued to be valued. I believe this is more harmful to women. If they are expected to fulfil traditional roles and modern roles, that is, (to take a hypothetical case) the role of a housewife and that of a professional, this will lead to greater role conflict. Also, if they have to conform to both traditional stereotypes and modern stereotypes, conflicts between various stereotypes will further create anxiety among women. Even in the study of Shalini Bharat (1994), it was found that husbands of career women (doctors, engineers and management executives) perceived the Indian woman as intelligent, career-oriented and outgoing; but they also valued women's traditional qualities like being nurturant, loving, supportive and patient. Many respondents clearly emphasized that working women need to balance between work and home. Surprisingly, even women (including career women) perceived themselves in these dual terms. Bharat argues that such duality of sex-role stereotypes creates tension and conflict and

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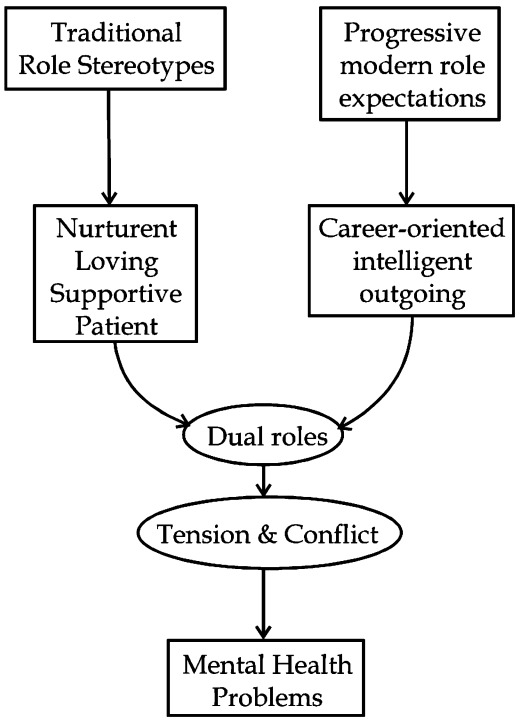
explains mental health problem of working women.



Women and Work in India

Men's role as provider of the family is both socially accepted and valued; hence men in India don't face any psychological problems. However the woman who works out is kind of a deviant..... she faces problems in

(a) performing her role in the household
(b) exploring professional excellence and
(c) dealing with work place sexual discrimination

This results in three kinds of problems :

1. Role conflict
2. Fear of Success
3. Discrimination

Role conflict will be discussed under a different head on mental problems. Now let us check out certain work related issues. Tarabadkar and Ghadially (1985) examined achievement motivation and job satisfaction among 50 professional and 50 non-professional men and women using the Thematic Apperception Test (TAT) and a job description method respectively. They found that men in general were more achievement oriented than women. Even professional women were lower on achievement motivation than professional men. The authors believe this is because of **fear of success** among women. **Fear of success** happens when women fear that too much achievement in terms of professional status will be conflictual to their traditional role in their culture. For example, if a woman fears that becoming a managing director will make her alien to her social group (family and friends) she would show low need for achievement.

Regarding barriers and glass-ceilings in the work-place, some typical studies exist. For instance, Hasan (1981) found that male administrators preferred to employ women who had no children. Generally, employees aren't favourably disposed to working women. Another problem is that of barriers of promotion. However, Parikh and Shah (1994) have made some encouraging revelations. They analyzed 600 women in the management sector and found that women managers who sought to transform organizations attempted to integrate their other identities with their professional identity.

Parikh and Shah have reasoned that the attitude of the top management and the visibility of senior women professionals as role models help facilitate the growth of women professionals.

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n Psychological Well-being and Mental Health

Statistics from mental health hospitals show that men are overrepresented in mental hospitals. This statistical fact has been often erroneously used to conclude that males face larger number of mental health problems due to the stressful burden on men to run families. Davar (1999) argues that such a conclusion is misleading; truth is that more women suffer from mental problems than men. The hospital statistics only reveal the exclusion faced by women. Most women patients don't get hospitalization facility.

There are numerous reasons why women face a greater incidence of mental problems, some primary ones being :

1. Deprivation and malnutrition
2. Fragmentation of Psyche
3. Role-Conflict

Women in India are more malnourished than men. The girl child is discriminated against by parents in providing food, and health facilities. And malnutrition is positively linked to mental problems. The fragmentation of psyche refers to the duality of feminine self and masculine self that doesn't get easily resolved in Indian culture.

Shweta Rajwade has discussed an interesting case where the masculine self and feminine self don't get integrated due to parental attitudes. This case was studied by Wright (Lemma-Wright, 1995). The girl having mental problems was a young Muslim girl, called Aysha. She found it hard to meet people, to go out alone and to have intimate relationship with men. She had dreams of being a man and showing off her penis to an audience who applauded her. Aysha always tried to look masculine, by wearing short hair and clothes which would make her body shapeless. She expressed disgust at her own body and her sexual experience was conflictual.

A background study helped Wright to find out that Aysha was the fourth child of a strict Muslim family. Her father had expected her to be born a boy. Aysha felt that she had disappointed her parents by being born a girl. Rajwade (2005) reasons that Aysha has been possessed by her animus (her masculine self) and had set aside her own feminine nature. She had internalized the beliefs of the male dominated Indian society, and had strongly *internalized the devaluation of the feminine*. This case represents a unique case that problems of a fragmented psyche can take. In a healthy person, the masculine and feminine selves are suitably integrated. In Indian women, this is not the case so.

While the fragmented psyche results due to incorrect socialization, another major reason for mental health problems is **role conflict** among working women. For instance, Tarabadhar & Ghadially (1985) noted that work-family conflict was expressed in 63% of the TAT stories that working women wrote. Men's stories didn't reflect any such conflict. Bharat (1994) had, in a study, analyzed the sex-role stereotypes of husbands of working women. She found that most husbands clearly emphasized that working women need to balance their home and work life. Even women perceived themselves in these **dual roles**. Bharat concludes that the tensions and conflicts inherent in dual roles explain mental health problems in working women. Other factors like parental status also affect mental health. Shukla and Verma (1986) have found that the presence of children in the age group 6 - 12 years and above 12 years are strongly associated with poor mental health. On the other hand, women with "empty nest" (i.e. where children have left home for studies or job) and those without any children enjoyed good health.

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n Women Across Developmental life-span

Discrimination against the girl child, in the form of **male preference**, starts even before birth in India. Vedic verses pray that sons be followed by still more sons, never by daughters. A newly-wed bride is blessed : "May you be the mother of a thousand sons". **Foeticide behaviour**, in which a female foetus is detected and killed before birth gains moral legitimacy from these scriptures. Further, the expectancy from a girl child is low. A son is needed to participate in religious rituals and to earn and feed the parents in their old-age.

The male child is adulated by one and all in the family; whereas, the female child faces the spectra of cultural devaluation of girls. Sudhir Kakar (1978) argues that this may lead to a heightened female hostility and envy in the girl towards males. However, there isn't that kind of strain between the sexes. Kakar argues that this may be because the girls and women turn the aggression against themselves and thus transform the cultural devaluation into feelings of inferiority and hopelessness.

The girl child is trained to become a 'good woman', with Sita as ego ideal. This training starts in late childhood as the girl has to be married off early. She is married off preferably after her first menstrual cycle as it is feared that if she isn't married for sometime after menstrual cycle begins, she may make wrong use of her sexuality. Hence, in most early marriage cases the adolescent period is suppressed in the girl. Upon marriage, 'an Indian woman must direct her erotic tenderness exclusively towards a man who is a complete stranger to her until their wedding night, and she must resolve the critical issues of feminine identity in unfamiliar surroundings without the love and support of' her family members (Kakar, 1978, p.23).

The bride comes to her in-laws' house not as a wife but as a daughter-in-law. In the social hierarchy of this new family, she occupies one of the lowest rungs. Obedience and compliance with the wishes of elder women of the family is expected of her. She has to perform some of the heaviest household chores. Basically, she has many roles to play but no status. She gets a status only when she becomes the mother of a son. Her identity rests primarily on the mother-son relationship.

The husband-wife bond at marriage is weak. The husband's mother often is quite apprehensive of the wife's sexuality and the control her sexuality can have over the husband; hence, she tries to keep them separate. Real intimacy between husband and wife develops later in married life.

Ironically, when this same woman become mother-in-law, she treats her daughter-in-law in same way her mother-in-law treated her. Smarak Swain (2009) calls this cycle the *saas-bahu-nanad* cycle, in which a woman interacts in certain specific ways with other women when she is in three phases of her life corresponding to the statuses *nanad* (sister of a man), *bahu* (wife of a man), and *saas* (mother of a man). Hence this exploitation of women in patriarchal system of India has been institutionalized.

n Violence Against Women in India

Acts of violence against women include dowry deaths, wife battering, sexual violence and trafficking in girls. Female feoticide and female infanticide are also forms of violence. The focus of Indian gender psychologists has been on domestic violence. They have tried to investigate into reasons for domestic violence : the masculine identity of the husband, social norms, women's acceptance etc. Some of the causal factors unearthed by psychologists are :

Misplaced masculine identity : U. Vindhya (2007) observes that the masculine identity in India is socially constructed, and is equated with aggression, hostility towards women, dominance, and rigid gender role expectations.

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These pathological qualities are part of how our culture defines the masculine identity. On top of that, this misplaced sense of masculine identity is strong in those who have had an incorrect socialization. Dhawan and colleagues (1999) observe, attitudes such as acceptance of physical chastisement of women and notions of male entitlement are strongly associated with parenting styles of mothers. Often the preference of male child over the female child creates a notion in the male's psyche that he is special and the female is an organism of inferior status. Such attitudes are cultural norms that are variously internalized by males during socialization. These males who internalize such attitudes of male superiority to a greater extent are more prone to resort to violent behaviour.

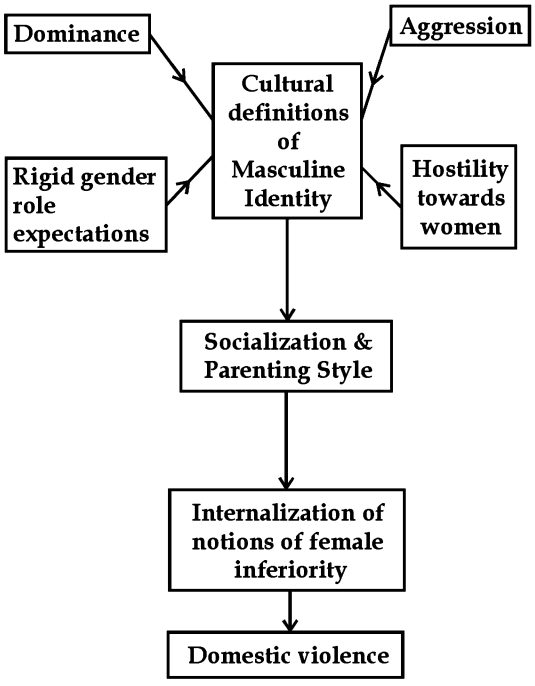

Fig: Mechanism of internalization of Masculine stereotypes by a male individual

Traits of the perpetrators : While cultural norms create notions of female inferiority and legitimize violence against women, individual characteristics ultimately matter when it comes to the real act of violence. Vindhya (2007) reasons from a literature survey that suspicion, negativism, masked dependency and low self-esteem of the perpetrator make him more vulnerable to violence against women. Mitra (2002) had studied men who were accused of domestic violence and found that they had constricted cognitive processes, poor impulse control, negativism and suspicion, and poor social skills. Those who inflicted psychological abuse only had impaired reality orientation compared to those who inflicted both physical and psychological abuse.

It has also been notices that husbands who physically and sexually abuse their wives also tend to be sexually active outside marriage and have multiple partners (Martin et al., 1999). Mitra (2002) argues that those husbands with illicit relations usually attribute their extra-marital relations to the alleged failure of the wife in fulfilling the expectations of a 'good wife'. I think this may be a form of projection or some others defence mechanism used by men to **rationalize** their extra-marital relationship and comfortably display outrage and violence against women accusing them of not conforming to womanly and wifely behaviour.

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12

Application of Psychology to Environment and Related Fields

- Introduction
- Noise
- Pollution
- Crowding
- Psychological consequences of Population Explosion
- Impact of rapid scientific and technological growth
- Conservation behaviour

n Environmental Psychology

Environmental Psychology is a field of psychological study that investigates the relationship between human beings and the environment, in order to enhance human well-being and improve ©human-environment fit. Environmental Psychology has a broad and multi-disciplinary focus : it borrows from various theoretical traditions of psychology and uses this knowledge base to study the impact of human behaviour on the environment and that of the environment on human behaviour. Further, the field is involved in promoting pro-environmental behaviour and conservation behaviour.

Some of the recurrent issues in research literature of environmental psychology are :

- What is the impact of **environmental stressors** like noise, pollution, and crowding on human behaviour ?
- How do we cope with these stressors ?
- What is the impact of human behaviour on environment ? Why do people use environment degrading technology and how do these affect environment ?
- How to motivate people towards showing conservation behavior ? How can awareness about environmental issues be increased ?
- How can psychological principles be used in architecture, in designing houses, schools and public places ? Ergonomics, that looks into person-environment fit in the workplace, is also a part of environmental psychology.

n Noise

Noise is an unwanted sound. As a sound, it is stimuli also. Sound waves in noise have certain characteristics that affect the sensory processes in the ear associated with hearing. Further, they are a burden on attentional processes. Yet, this is not the whole story. Researchers have found wide and far ranging effects of noise on the human physiological and psychological functioning. From a psychological perspective, noise is defined as an **environmental stressor** that affect human functioning.

The effect that noise has on a person is mediated by many factors like nature of noise and human perception of the noise. Five factors that affect the nature of stressors, discussed in the section on stress , that is, Predictability, Intensity, Duration, Controllability and Chronicity, also hold for noise. The relative influence of the five factors can be discussed as under :

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1. **Predictability** : Any sudden and unpredictable event in the surrounding automatically draws our attention towards it. The sudden blast of a cracker, or abrupt noise created by factory always draws our attention. Not only this, unpredictable stimuli leads to automatic arousal. When you see a snake (unpredictable stimuli), you instantly become alarmed. Such physiological response is also produced due to unpredictable noise.
2. **Intensity** : Intensity of noise has been correlated with hearing difficulties in many studies. For example, Raja and Ganguli (1983) have found that the hearing capacity of workers in a printing press were adversely affected by noise as compared to a group of employees in an academic institute. They note that the noise the printing press workers were exposed to was 110 dB. Not only hearing ability, researchers have found that exposure to high intensity noise (more than 90 dB) increases blood pressure, heart rate, skin conductance, and catcholamines (Cohen and Weinstein, 1982). Other studies have concluded that exposure to high level of noise is related to cardiovascular disorders, digestive disorders and allergic reactions.
3. **Duration** : The duration in any given day that one is exposed to noise also affects the way noise affects a person. In the earlier example of printing press workers, it is possible that those workers showed greater impairment of hearing capacity rather than workers of academic institution because the duration of exposure to noise is also high there. If you frequently visit the disco, you must have observed that the rock music is of high intensity there (110 to 120 dB) and anyone is exposed to it for one to two hours non-stop. This results in severe loss of hearing (Labo and Oliphant, 1928).
4. **Controllability** : The perceived control one has over exposure to noise affect her response to the stressor. Indeed, the effect of any environmental stressor depends on the cognitive appraisal of the stressor by the individual. In the case of noise, the perceived control over exposure to noise determines one's response. When standing in a long queue for admissions, you feel very irritated and annoyed. This sometimes leads aggression also. This is so because you don't have any control over the noise. People living near railway tracks become irritated because their perceived control over the stressor is low. On the other hand, if you are attending a noisy party, you don't get irritated by the noise because you could control your exposure to the noise by leaving the party.

   In the experiment, people were given the opportunity to control noise (by, for instance, having the option to switch off a loudspeaker). They tolerated the noise easier than a group of people without control over noise without even using the control device (Glass and Singer, 1972).
5. **Chronicity** : Seyle's General Adaptation Syndrome hypothesis forwards that when an individual is exposed to a stressor for a persistent period of time, her **bodily resistance** becomes active. But after some time, **exhaustion** happens, and the individual coping strength decreases. The response to chronic noise also happens to be exhaustion. The body stays at an over-aroused state for a long time, till its resources are exhausted. Then a number of physiological and psychological problems result. This is the reason why urban residents are adviced to stay in residential colonies, away from market noise or the noise of airports and railway tracks. Yet, many urban settlements are exposed to chronic noise, that leads to negative effect.

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n Effects of Noise Pollution

In the above discussion, we have already noted some effects of noise. Now, let us systematically study the multi-dimensional effects of noise pollution :

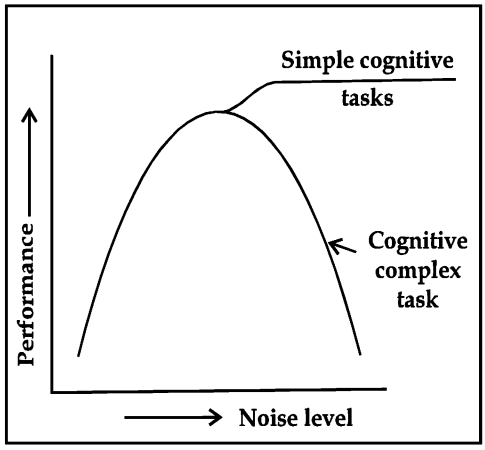
1. **Performance :**

The effect of noise on performance has been researched the maximum in Indian psychological literature on noise pollution. The general conclusion is that motor and manual performance increases with noise intensity upto a level, after which performance starts decreasing. For example, performance has been found to increase under 100 dB noise, relative to quiet condition (Bhattacharya et al., 1978) and decrease beyond 110 dB condition.

From a literature survey, Uday Jain and M. N. Palsana (2004) observe that cognitive task performance can be explained by using the **arousal model.** From the Yerkes-Dodson law, we know that performance has an inverted-U relation with level of arousal. Indian researches have shown that similar relation holds between cognitive task performance and noise level for complex tasks. Noise being a stressor, increased noise level is associated with higher arousal; hence this relation. However, performance did not seem to deteriorate for simple tasks.

Specific cognitive functions like **vigilance** and **attention span** also seem to be adversely affected by noise (Rastogi and Das, 1993, see Jain and Palsana, 2004). Reduced vigilance and attention span obviously affect the job performance of many workers and security guards.

Besides effect of noise on work performance, another area of concern is the effect of noise on students' performance in schools. In one study, the effect of noise on school children's performance was tested (Bronzaft and McCarthy, 1975). The school building had two sides. One side ws close to a railway track and hence exposed to noise from trains. The other side was free from such noise. The researchers compared the students' performance on reading assignments. If we found that the reading skills of students on the quiet side was much superior to that of students of the noisy side.



2. **Hearing Capacity :**

Two factors seem to hold the key to effect of noise on hearing capacity : **intensity and chronicity.** Many studies conducted on workers working in noisy environments have demonstrated the effect of noise on hearing. The Raja and Ganguli study discussed earlier showed how hearing capacity of printing press workers exposed to 110 dB noise daily was lower than other workers.

Why does this happen? Basically, the human ear has three parts : outer ear (that receives sound stimuli), middle ear and inner ear.

Some components of the middle ear and inner ear vibrate in response to sound. The sound has an amplitude and frequency. The sound frequency determines the frequency of vibration of eardrum. Everytime sound waves

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strike the eardrum, the eardrum vibrates at a corresponding frequency. This is communicated to the brain by a complex mechanism. **Loud sounds** have high amplitude and affect the strength of vibration. Now guess what happens when you are exposed to abnormal levels of noise for a long time. The eardrum loses its plasticity, that is, sensitivity. It is unable to pick up sounds of lower frequency and amplitude.

3. **Mental and Physical health :**

Noise is associated with **stress and arousal.** Both stress and arousal demand many physiological resources. Due to this, noise becomes associated with ill-health. Exposure to high intensity and unpredictable noise increases heart rate, blood pressure and skin conductance (Cohen and Weinstein, 1982) and increases the vulnerability of cardio-vascular disorders, digestive disorders, and allergic reactions (Cohen, 1973).

Noise pollution also affects mental activity. Muhar and his associates have conducted many experimental studies to link these (see Jain and Palsana, 2004). In these experiments, typically the participant is given some tasks in a noise condition, and mental energy spent in doing the task is measured through galvanic skin response (GSR), blood pressure and pulse rate measures. The nature of noise (frequency, predictability, control etc.) is changed to see the effect on mental work. Muhar has found that the quiet condition is the most conducive, and the unperiodic noise is the worst for mental work.

4. **Aggression :**

Aggression is a dominant response to noise pollution. A long time ago, I used to stay in a locality in which some idiots used to run devotional songs in a loudspeaker early in the morning. This often increased my levels of irritation and annoyance. Such irritation also increases when you are stuck in a traffic jam. The basic mechanism of how noise leads to aggression can be represented as :

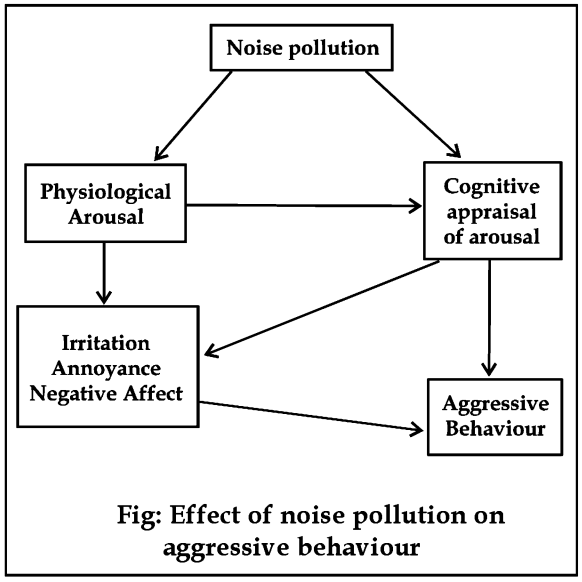

Fig: Effect of noise pollution on aggressive behaviour

The effect of noise pollution on aggressive behaviour is mediated by two sets of factors. First, the cognitive appraisal. If you are watching a rock concert (which is more noise and less music !) and you are enjoying it, you don't get annoyed by the noise. On the other hand, if you are in the middle of traffic, you don't enjoy the noise. If any small incident happens (say a small argument with a stranger), you become irritated and annoyed. High arousal and irritation are second set of factors. Together the two sets of factors lead to anger as an emotional response that leads to aggressive behaviour.

You must have read newspaper reports about road rages in big cities. These road rages start with small arguments over. Someone not able to park his vehicle, or some small accident. People turn aggressive and violent, many-a-times leading to death !

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n Pollution

The issue of pollution – air pollution, water pollution, soil pollution – is one of the persisting problems in third world countries like India. The health effects of pollution on people are significant. In fact, some toxic pollutants even mutate our genes, leading to defective gene structure.

Talking of pollution as a stressor, let us understand how serious the problem is in terms of predictability, intensity, controllability and chronicity. As regards **intensity,** pollution as a stressor is very intense in urban areas, specially in metropolitan cities with huge population, high vehicular emissions, high sewage wastes, high amount of non-biodegradable products, and usage of inefficient energy. The exposure to pollution, however, varies across social classes. The upper class is the greater polluter (in terms of energy consumption); yet upper class members can afford to adopt to climatic changes and avoid pollution stressors by staying in clean buildings with air conditioned climate. They also have the best supply of clean water. On the other hand, are the lower class members who stay in slums and other shanty locality. For them, pollution stressors are **chronic.** They are especially affected by air pollution. They are chronically exposed to an extremely polluted built environment.

What is the perceived **control** one has over pollution stressors ? Controllability here refers to ability (i.e. efficacy) of an individual to control pollution. Now, pollution happens at two levels: **global and local.** Global pollution can not be controlled by groups at local level. Issues like emission of green house gases, global warming etc. are being debated by countries in order to reach at an understanding. At the local level, community members can deal with pollution by controlling the sources of pollution. Yet, people don't seem to exercise this control. Why ? A few reasons for the low prevalence of conservation behaviour, are :

1. There is low awareness of the effects of pollution on health.
2. The largest polluters are the people who belong to the upper class. They can afford to use costly technology to shield themselves from pollution.
3. Poor people are usually the sufferers. They have to bear the effects of pollution chronically, and at high intensity. Neither can they afford the technology to shield from pollution, nor are they aware of effects of pollution. No wonder, they don't show conservation behaviour.

The effects of pollution on physical health are well documented. There also are many serious effects of pollution on mental health and psychological well-being. Some of these are :

1. **Mental ability** : Various toxic wastes in polluted air and water have been reported to affect mental ability. Some toxic substances like lead and asbestos have the ability to retard proper development of the brain. In one study, S. P. Sinha and Vibha (1994) tried to correlate lead pollution with IQ level. They formed two groups of participants : one from high traffic density area and the other from low traffic density area. Hair samples were collected and tested for lead. IQ level was also assessed using Wechsler

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Intelligence Scale for children. As obvious, the children from high traffic density area had more lead in their hair (because vehicular emission has high concentration of lead). However, Sinha & Vibha also found that this group had lower level !

May be one of the reasons why children from disadvantaged groups, who stay in slums, show low cognitive development (see chapter 8) is exposure to pollution.

2. **Performance** : Pollution affects work performance. People working in highly polluted areas have to use up lots of resources in coping. They face lung problems and have breathing difficulties. Poor vigilance performance and eye complaints have been observed in traffic policemen exposed to vehicular pollution in comparison to general policemen. (Gupta & Rastogi, 1991).

   Various types of pollution seem to affect attention, perception, memory, intelligence, respiratory system etc. For example, organic solvents have been found to reduce memory, digit span, and dexterity (Saxena, 1992).

3. **Heat and aggression** : Now we turn our attention to psychological consequences of pollution at the global level : global warming. While global warming has generally benefitted the countries at higher latitudes (by way of increased crop productivity, milder climates etc.), the effects on countries of tropical areas are quite negative. One area of concern is hot weather. Psychologists have found that high temperatures lead to negative feelings and aggression. For example, drivers of automobiles without air-conditioning were studied by Kenrick and Mac Farlane (1986). They found that in a traffic jam, the horn-honking of drivers increased with increase in ambience temperature. This shows that impatience and annoyance of drivers increase with rise in heat.

n Crowding

Crowding is defined, in a psychological sense, as a psychological state emanating from the felt lack of space (Stokols, 1979). Hence, crowding is not an objective construct; rather a subjective experience. **Density** refers to objective crowding; it is a physical measure of the number of persons in a given space. The subjective experience of crowding, on the other hand, is a psychological state, and hence is mediated by many human factors.

Human Factors in Crowding

Uday Jain and Giriswar Misra (1990) reason that 'density in itself has no effect on mood and behaviour. It is the *experience of crowding* which is responsible for negative effects. The distinction between objective crowding (density) and the feeling of crowding (subjective experience) led researchers to identify the variables mediating the feeling of crowding' (Misra, 1990, P. 267). Hence, if I am enjoying myself in a high density disco, I am not experiencing crowding, nor is the disco crowded. On the other hand, a local train with the same density may seem crowded to me.

The mediating factors responsible for crowding are of special interest to psychologists. These mediating factors refer to individual differences, that is, differences in human factors like attention, cognitions, emotional response,

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gender, age etc. Let us study some of the mediators in the experience of crowding.

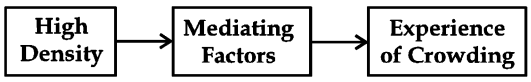

Fig: Conceptual link between density and crowding

1. **Stimulus overload** : The overload model explains crowding in terms of excessive stimulation. We know that the attentional resources at our disposal have limited capacity. Through the process of attention, information is processed. In high density conditions, if information is received at a high rate from different sources, it strains the attentional resources and lead to negative affect (Sacgart, 1978). Can this explain why we don't feel crowded in discos but do feel crowded in local trains with same density ? In discos, our attention is more towards the DJ's music, we are almost oblivious of other sounds. On the other hand, 'noise' reaches us from many sources in local trains.
2. **Behavioural constraints** : The degree of behavioural freedom one has in high density conditions is low. If the person is ok with it, she doesn't experience crowding, but if she minds the reduced freedom of movement, she experiences negative affect.
3. **Arousal and Attribution** : The two-factor theory of emotion states that any emotional response is the result of physiological arousal and the factors one blames for the arousal (i.e. cognition of factors one attributes the arousal to). High density leads to overstimulation of sympathetic nerves that lead to arousal (Evans, 1972). Now, if the individual attributes the cause of her stress to the density, she experiences crowding. In a disco, you are over-aroused. But since you are a little high on vodka, and are on the dance floor, you attribute the arousal to 'fun'. In a local train, you don't have any other factor to attribute your arousal to. So you experience crowding. I had once taken an extremely introversted girl to a disco (seriously, I am not exaggerating !). She neither danced, nor enjoyed the music. Her response to my question on the disco was that it was crowded.
4. **The perceived scarcity of resources** may be an important factor in crowding. According to the **ecological model** (Wicher and Kirmeyer, 1977), perceived scarcity of resources leads to negative affect. In crowded local trains, you often don't find a seat, or a place to stand, and you curse the railway ministry. This scarcity of resources leads to negative affect. But mind it, it is not the scarcity of resources, but its perception that leads to a feeling of crowding. A person who daily commutes in the local train, and is comfortable standing on others' feet doesn't experience crowding.

Content of the Experience of Crowding

Now that we know the factors that lead to crowding (high density, followed by many mediating factors), let us turn our attention to the experience itself. What is crowding ? What feelings (or emotional and cognitive responses) do you refer to as crowding ?

Uday Jain (1991), the first Indian psychologist to study crowding, has proposed four types of

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experience in crowding :

1. Negative affect
2. Loss of control
3. Congestion
4. Disturbance

If you feel crowded, it may be because you experience all or any of the above feelings. Negative affect refers to mood disturbances, irritability, and annoy. Loss of control refers to the feeling of helplessness. It is associated with limited freedom and limited movement. Congestion is the feeling of lack of space. Every individual has a perceived personal space (which keeps varying) and she desires to desire for that much space. Anything less than that leads to congestion. Disturbance is the feeling of being disturbed. In high density situation, disturbance generally occurs due to noise, invasion of privacy and harassment (Jain and Palsana, 2004).

Effects of Crowding

Jain and G. Misra (1986) have forwarded a theoretical model of the behavioural consequences of crowding. This model 'posits that crowding is a psychological state experienced on the basis of high population density as mediated by physical resources and coping mechanisms. Depending upon the moderating effects of these variables people may experience different degrees of crowding in similar or identical environments having the same degree of density'. (Jain and G. Misra, 1990). Above logic can be represented as :

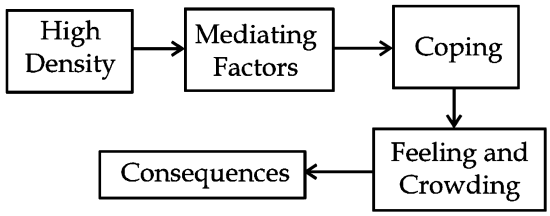

Fig: Essence of Jain and Mishra model

The consequences of crowding are manifested at three levels : individual, interpersonal and societal. The model of Uday Jain and Giriswar Misra also specifies some of the consequences. These consequences are represented in the box below :

Consequences of Crowding		
Personal	**Interpersonal**	**Societal**
Stresses **Health Status** **Aggression** **Anxiety** **Withdrawl**	**Competition** **Interpersonal attraction** **Helping**	**Participation in social activities**

Let us discuss some of the above consequences :

1. **Health Status :**

As a stressor, crowding elicits overarousal of sympathetic nerves of the autonomic nervous system. Hence, it has effects on health similar to that of other stressors. Crowding may cause physiological changes like increased blood pressure and changes in cardio-vascular system. In one study, Evans (1975) put five males and five females in a small room for three and half hours and measured the subjects' heart rate and blood pressure. Then the subjects were put in a larger room (lower density) and these measures were again taken. The conclusions validated that in high density conditions, heart rate and blood pressure become abnormal.

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2. Aggression and Anxiety :

High density and overcrowding have been correlated with aggression. However, there is a debate on what causes aggression. One reason may be that crowding induces negative feelings in the individual, which may manifest in the form of aggression. High physiological arousal compounded with negative feelings lead to aggression. Jain and G. Misra observe that negative feelings induced by crowding make people more and more susceptible to repulsion rather than attraction, social tension than harmony, aggression than prosocial behaviour' (1990).

Another possible factor responsible for aggression is **competition.** Competition over rare resources leads to frustration; and frustration leads to aggression.

Anxiety is another emotional response to stressful situations. Chronic stress often leads to chronic arousal, and anxiety. Those staying in crowded conditions, like slum-dwellers or prison inmates, or those staying in overcrowded hostels are more vulnerable to anxiety as a response, because their exposure to crowding is chronic.

3 Social Withdrawal :

Social withdrawal is a coping strategy to escape the stressors of crowding. If one uses this as a strategy, it itself becomes an ill-effect of crowding. Basically, those who share a small house with many family members may experience crowding chronically. To cope with the chronic stressors, some people loosen social bonds and withdraw from social support (Evans et al, 1989). Ironically, social support is an important moderator of stress. In the section on stress (see chapter 2), I have discussed how social support reduces the impact of stressors. By social withdrawal, the individual makes use of an incorrect style to cope with stress.

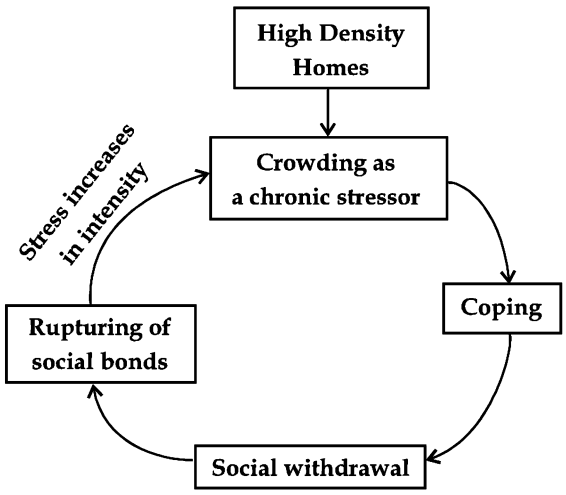

Fig: Vicious cycle of crowding and social withdrawal

4. Task Performance :

Many empirical studies conducted in recent times have demonstrated that crowding impedes task performance and inhibits the realization of optimum potential of the individual. For example, Nagar and Pandey (1987) have found that crowding leads to a deterioration in performance on cognitively complex tasks. The effect of crowding on simpler tasks (that don't require high cognitive resources) is not substantial. Crowding also affects performance on memory tasks. Hence, the academic performance of a student in a crowded classroom or a crowded exam centre may be adversely affected due to lower memory recall ability.

5. Competition :

A direct fall out of high population is that the amount of resources available to each individual is less. In one study, Uday Jain (1987) manipulated high-low social density and adequate and scarce resources. The

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'feeling of crowding' and 'preferred interpersonal distance' of subjects were measured. It was found that subjects experienced greater crowding under scarce resource condition than adequate resource condition.

Competition itself leads to other undesirable consequences like frustration, anxiety etc. On the other hand, **competition tolerance** moderates the effects of high density stress.

6. **Helping behaviour :**

A very peculiar effect of high crowding situation is *bystander apathy*. Suppose a person is injured in an accident in the middle of the road. Many people gather around, but none seems to help the person. This is because of a diffusion of responsibility in crowd. Every person thinks that he/she is less responsible to help the person because of the presence of so many others.

Other than this effect, general helping tendency also may decrease in crowded environments.

7. **De-individuation :**

Deindividuation is a psychological state that people may experience in crowds. Deindividuated individuals lose their individuality and uncritically follow group norms that may emerge in crowds. The individuals in a crowd do not know each other : this anonymity perhaps reduces restraint and the individual may lose her individuality once this happens, she follows the norms that may evolve in the crowd.

When an individual loses her individuality and becomes disinhibited, she may indulge in many anti-social actions, like participate in a mob, vandalise public property without any reason etc.

8. **Interpersonal attraction :**

Long-term density confinement has been correlated with low attraction. For example,

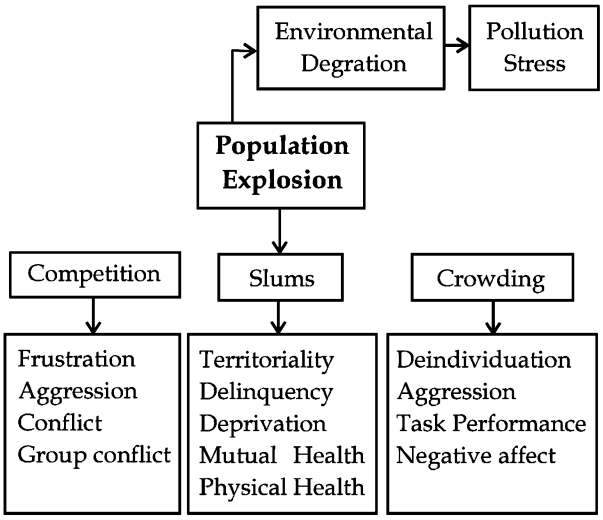

Fig : Effects of population explosion

Baron and Bell (1976) conducted an experiment in a hostel where three students were accommodated in double rooms. The researchers compared these students with other students who lived two each in double rooms. They found that former students were less satisfied with their room-mates and were less cooperative than the latter group of students.

This finding holds immense significance in Indian context, given that our prisons, hostels, and even homes are overly crowded.

n Psychological consequences of Population Explosion

Population explosion is one of the pressing problems faced by India and many developing countries. Two direct consequences of population explosion are **high population density** and excessive pressure on limited resources. Excessive pressure on limited resources leads to unsustainable exploitation of resources, which also leads to pollution. The situation is especially acute in **urban environments**. Here, the population density is unusually high. Natural environment is polluted due to excess emission

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of pollutants by a huge population. The build environment in urban places mostly consists of unplanned localities, high density and low personal space in neighbourhoods, and slum settlements. In this section, we will explore some important psychological consequences of population explosion and high population density. For this, we shall follow the model given in figure:

1. **Competition :**

Competition over limited resources is a direct fallout of high population. If population is high, the per capita resources available is low. Jobs available are limited; economic opportunities are limited; and food produce is limited. Competition leads to undesirable consequences like frustration and anxiety (Jain and G. Misra, 1990). On top of that, competition can give way to violence and conflict. In the face of limited opportunities, one group is bound to become mere prosperous than another. Differential prosperity fuels feelings of relative deprivation. While the core reason is economic, the conflict that ensues is psychological. The feelings of relative deprivation gets directed as feelings of hostility towards a more prosperous outgroup.

Many studies conducted in India have concluded that **riots** and caste conflicts are a result of economic prosperity of certain sections of minority groups (See page 206). Sherif's realistic goal conflict theory also argues that intergroup competition leads to prejudice and group conflicts. All these are potential consequences of competition by a large population on a small resource base.

2. **Slums and Urban environments :**

The worst effects of population explosion are on urban environments. Urban areas usually have more opportunities than rural areas. Due to high in-migration, urban areas become much more densely populated than the average population density of the country or state. Due to high population in very small urban areas, there is pressure of land, of good housing and basic amenities like clean drinking water. 'Unable to meet the staggering demands for basic amenities, cities of India are characterized by teaming hovels of dirt and garbage, overcrowded and noisy lanes, and a proliferation of slums. The proportion of urban populations living in slums varies from 20 to 30%. It is estimated that 1,080 slum clusters dot the sprawling megolopolis that Delhi has become.... These settlements are deprived of the basic amenities of water supply, sewage and drainage systems, and waste disposal facilities. This creates unhealthy living conditions' (Siddiqui and Pandey, 2003).

The people who stay in slums are disadvantaged people. They are deprived of a rich environment. Deprived of stimulations, they face many problems of physical health (for example, malnutrition) and mental health. Many studies have confirmed that they have inferior cognitive development and maladaptive personality traits. Their motivation pattern is dominated by high need for dependence and powerlessness (for details, refer the chapter on deprived groups).

3. **Deviance and Deliquency :**

When population is high, competition to meet common goals (in terms of jobs, resources etc.) is also high. However, the poor don't get enough opportunities to realize these goals. They are at an obvious disadvantage in realizing these goals. For example, an english educated child of a rich father who can afford coaching has better advantage than a student from a slum. Non-attainment of goals lead to frustration. These people get induced to engage in crime and other deviant acts.

Often, a sub-culture develops in lower socio-economic status (SES) localities. It is

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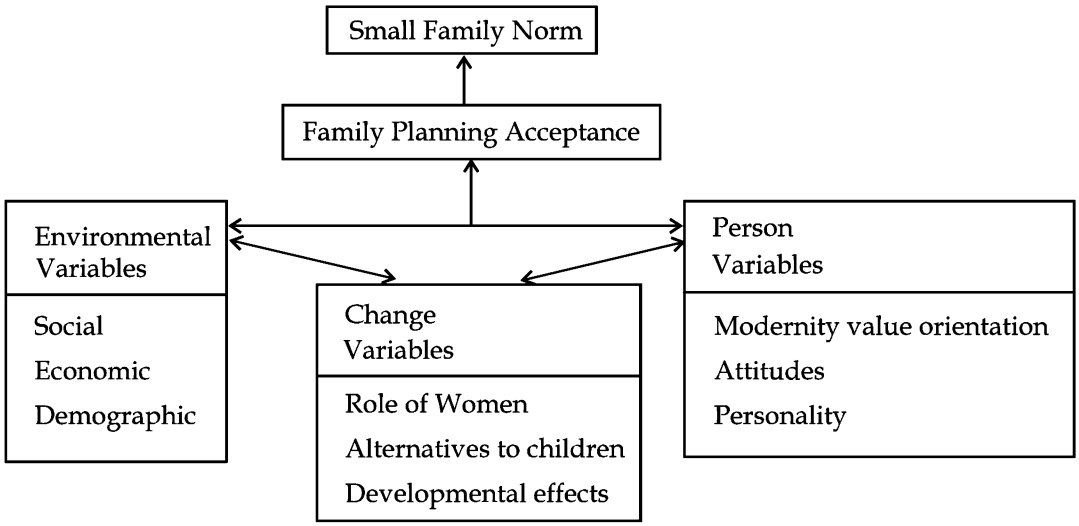

Figure : Factors affecting the acceptance of family planning

the sub-culture of deliquency that values crime, breaking laws, and making easy money. Many children are recruited to these deliquent groups at a young age.

The crime rate in cities and nearby areas is higher than normal because of the phenomena of deviance and deliquency . With more population pressure, the incentives to show **deviant behaviour** will also increase.

4. Spatial Behaviour and Population Explosion

Two spatial concepts relevant to psychological studies are **territoriality** and **personal space.** Territoriality is the visible space occupied by a person. It is the territory that the person 'owns' in the sense that she can regulate the entry of others in this space. For example, I have a separate room in my house. I can regulate the entry of others into the room. Hence, it is my territory. On the other hand, in many slums five to six people stay in the same room. The territory of each may be negligible or absent.

Personal space is an ***invisible boundary*** one maintains while interacting with others. This is a very subjective concept. Personal space keeps varying depending on the individual's mood, time of the day, situation, the person she is interacting with etc. For example, I would be very close and intimate with my girlfriend (at-least I will try to be. It also depends on her personal space). In the case of a close friend, my personal space will be less; with an obnoxious acquaintance my personal space becomes more. I will prefer to maintain some distance from strangers.

Many studies have focussed on the psychological variables involved in territoriality and personal space. Jain (1987) raises concern that in high population density condition, the personal space is encroached upon. In deed, many people staying in high density cities don't have any territoriality.

5. Crowding :

Crowding is the subjective experience of population density. There are broadly two meanings of density : if the number of persons in a given space are changed, the **social**

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density changes; if the space changes without changing the number of people, it is called spatial density.

$$\text{Density} = \frac{\text{Number of people}}{\text{Space occupied}}$$

$$\text{Social Density} = \frac{\text{Number of people}}{k_1}$$

$$\text{Spatial Density} = \frac{\text{Number of people}}{k_2}$$

Where k_1, k_2 = constants

Many psychological studies (for example, Jain, 1987) have shown that the feeling of crowding is associated with both spatial and social density. Various effects of crowding and high density are separately discussed in another section in this chapter.

n Motivating for small Family Norms

Planners and scholars of India had realized the pressing problem of population explosion even before independence. Hence, a family planning programme was incorporated in the first five year plan itself. The family planning programme has been a priority issue in all five year plans since then. Yet, the impact of these programmes at central level, or in various states has not been impressive. Majority of Indian families don't follow the small family norm.

There are a host of social, economic and demographic factors involved in **fertility behaviour.** These factors are, however, mediated by psychological factors like attitude, values and personality of the husband and wife, the communication between the couple etc. To motivate people towards small family norm, we should attack at the base factors (demographic, social and economic) as well as mediating psychological factors.

Fertility Behaviour of Indians

Overall, there are three categories various people can be divided into :

1. Those who don't have knowledge of family planning and so don't follow small family norm.
2. Those who have knowledge of family planning but their attitude towards small family norm is negative.
3. Those who have positive attitude towards small family norm but do not show corresponding behaviour.
4. Those who have positive attitude towards small family norm, and show corresponding fertility behaviour, such as having safe sex during risk period of menstrual cycle, using contraceptives etc.

The fourth category is the desired category that every family planning worker wants people to be in. From a psychological perspective, the third category is most challenging. Why do these people have positive attitude towards small family norm, yet don't do family planning? Ravi Kumar Verma (1990) observes that a 'highly favourable attitude towards family family planning followed by a very low practice has posed serious problems to researchers and planners alike'. And worryingly a significant chunk of people belong to this category. For instance, N.L. Srivastava (1975) found that nearly three-fourths of newly married males he surveyed in different parts of Patna city said that they were not in favour of large families. Nevertheless, 50% of all the pregnancies reported were unplanned.

Awareness of family planning and its advantages leads to a positive attitude towards small family. This attitude is a **necessary but not sufficient condition** for fertility behaviour that leads to small family norm. At this point, it may be right to discuss some individual variables affecting fertility behaviour. Based on a literature survey, R.C. Tripathi (1989) points out some factors that affect fertility behaviour :

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1. Lower social class urban men prefer a large family size than their wives.
2. Rural men and women desire a large family site.
3. Higher the education level and status of women, the lower is the desired family size.
4. Traditionalism is associated with a higher family size norm.

Some characteristics of those who adopt small family norm in comparison to those who don't are :

1. **Value orientation :**

Values of free will, activism, individualism, modernism, secularism and adventure are positively correlated with the desire for small family (Katiyar, 1976). On the other hand, traditional value orientation seems to promote large families. In an intensive study of family planning among Muslims in Kanpur, Khan (1979) observes that negative attitudes towards family planning are due to religious fatalism, fear of complications, husband's authority and lack of communication. Many other studies have found that fertility behaviour is similar for Hindus also. So it can generally be said that traditional value orientations like patriarchal authority (resulting in subordination of wife's views), religious taboos etc. hinder adoption of small family norm.

Another factor that affects fertility behaviour is a strong value preference for sons. Son preference is a dominant value of our social system, and finds explicit mention in our ancient scriptures (see page ---). Son preference is closely associated with adoption of small family norm. The chance of getting a son in any attempt is 50%. But many people use the faulty logic that if they have not had a son till date, the probability of getting one is now higher. Hence, if a couple don't get a son in their n^{th} attempt, they get motivated to try for a $(n+1)^{th}$ time for son. I know a person who had nine daughters before having a son. Everytime he guessed that now that he has so many daughters, the probability of having a son is more in the next attempt (though logically it is only 50%).

2. **Attitude :**

Attitude is closely related to value orientation. However, those people with open attitude are more prone to accept family planning programmes than those with authoritarian attitudes.

3. **Personality :**

Many studies have established that acceptors of small family norm are more prone to change, possess rational thinking and have high subjective efficacy (Khan and Prasad, 1980). In a study comparing the personality traits of adopters and non-adopters, it was found that adopter women tend to be less anxious and more intelligent (Kumar and Gairola, 1981).

4. **Motives :**

Many studies have found that the primary motive of having many children is old age security. Paliwal (1979), for instance. analyzed the motives for desiring a third child in a village near Lucknow. The dominant motive was to have greater old age security.

Social Norms vs. Small Family Norms

According to Fishbein and Azfen's Theory of Reasoned Action (TRA), two factors (attitude and subjective norms of the group) influence behaviour. Perhaps this explains why positive attitude towards small family is not followed by corresponding behaviour. Many traditional and religious norms oppose family planning measures like use of contraceptives, abortion etc. Catholic christians are staunchly against abortion because they believe the foetus is a living child of God. Similarly, some Hindu and Muslim cults are against surgical contraception

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methods like vasectomy. In a classic study, Gore (1973), showed how the issue of family planning is still a taboo among tribal groups. Approximately 17% of the total tribal respondents in his study simply refused to answer questions pertaining to attitudes towards family planning. About 70% of the respondents evaded questions about the actual use of contraceptives. If such is the taboo about family planning, adherence to small family norms will obviously be low, even if the attitude is positive.

Motivating for Small Family Norms

Till now, we have just discussed factors that are conducive to or resistive to, fertility behaviour. This was necessary in order to make you feel the enormity of the challenge of motivating for small family norm. Most of the government policies are based on following strategies :

1. **Awareness generation** through advertisements, social messages etc. These strategies help to change attitudes, which are necessary but not sufficient to motivate people for small family norm.
2. **Rewards and punishments** for showing fertility behaviour. Many incentives are given to people in order to induce them to go for small families. At some stages, punishments were also meted out for having large families. Fortunately, these have been done away now.
3. At some point, especially during the emergency period, compulsory sterilization was practised. Not only was it unpopular, compulsory sterilization didn't have any long term impact. In deed, it did harm the family planning programme. People became alienated from family planning and started looking at these programmes suspiciously. All the good work done to create positive attitude towards family planning was lost.

How good a motivator is reward ?

This has been the subject of much intellectual discussion. Behaviourist scholars would naturally state that rewarding behaviour for small family increases the probability of it. But this is not that simple. In the Hawthorne studies, Elton Mayo observed that employees' behaviour was more motivated by *group norms* than rewards (bonus, pay etc.) given by managers. On similar lines, it can be stated that rewards aren't as potent as *social norms* in determining fertility behaviour. In fact, they aren't good motivators at all. This was demonstrated by Khan and Prasad (1980). They studied the role of monetary incentives in promoting sterilization among industrial workers. They found that monetary incentives, when used as independent variables, explained less than 1% variance.

Now let us turn our attention to some interventions suggested by psychologists to motivate people towards small family norms :

1. **Sex Education :**

   Schools have been the favourite target of psychologists for interventions, because of the fact that values and attitudes can be best fostered here. Sex education (and health education, in general) should be made a part of curriculum of schools. Sex education is necessary because many people don't have the requisite knowledge about controlling family size. Tell me, if you don't know which period of menstrual cycle is risky, if you don't know the use of condoms, if you don't know what contraceptive pills are, or if you don't know that pregnancy can be aborted, can you follow a small family norm ? Surprisingly, many people don't even know! I know only because I am quite curious about these things. But many don't have access to these sources of information. For them, sex education in schools is necessary.

   In one study, 500 mothers of newborns was interviewed in maternity wards (M.L.

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Sinha, 1976). Approximately 31% of the women were not aware of family planning techniques. How do I motivate people towards small family norm if 31% are simply beyond my range of influence ! Hence, the need for sex education. S.R. Desai and N.R. Mehta (1976) have found that groups which receive health education about contraceptive methods practice it more in comparison to those that do not.

2. **School Education :**

School education as a strategy for family planning must not be restricted to sex education. Rather, the curriculum must be made more broad-based to make the students' attitudes and personality more modern and prograssive. 'Modernity value orientations, such as, entrepreneurship, openness to change, and subjective efficacy may be inculcated at the stage when young boys and girls are fantasizing about their future. The advantages of delaying marriages should be conveyed to young boys and girls which would enable them to move around for various career alternatives .....' (R.K. Verma, 1990).

3. **Changing Social norms and values :**

Social norms seem to me the biggest resistance to adopting small family norms. Hence, motivation strategies should include strategies to change social norms. In the chapter on community psychology, we have seen how social norms can be changed by concerted action of the community. The value preference for sons should be made specific focus of attack by panchayats and community leaders.

4. **Awareness Creation sensitive to social norms :**

Not all social norms can be changed. Religious norms are too resistant to changes. Further, various sub-cultures have their own values and folk stories. Awareness programmes can be more successful when they incorporate these folk lores and religious symbols. For instance, you can design messages that say Pandu had five sons but Dhritarashtra had 100 sons. In the battle of Kurukshetra, Pandavas won because Pandu could take better care of 5 sons. There are so many religious scriptures in Hindu literature that in some of them you will surely find phrases that promote small family norm.

Gulati and Moni (1975) believe that motivational methods should be consistent with the subcultures in which they are used because every society has its own system of communication. There are, for example, many tribal communities in which pregnancy is considered a blessing of God. These people will obviously find messages to prevent pregnancy as sacrilegious. So you need to innovatively present your message.

5. **Role Models :**

Role models are a very potent source of motivation. People vicariously experience the success of role models and this motivates them to follow the behaviour of role models. Female role models can be highlighted to show to people that girls can also make it big in life. For those people who go for large families to get sons, showing female role models increases their expectancy from daughters.

Those members of the community who have had less number of children and have succeeded in life can also be used as role models. This increases the **subjective efficacy** of people. If one sees role models who have restricted family size to two children, have amply provided for the children and the children have succeeded in life, he/she is motivated to allow small family norm.

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Impact of Rapid Scientific and Technological Growth

What may the impact of science and technology be on environmental degradation ? Technology has **no** impact on environment. It is the *application of technology by humans* that leads to environmental degradation. Hence, the impact of scientific and technological growth on environment is mediated by *human factors*. If the technological progress were judiciously used, it wouldn't lead to environmental degradation. Science is a body of knowledge. Technology is the application of science. Technology empowers the human to exploit his/her natural environment. In this section, we will study human behaviour in relation to the ability that technology empowers the human with.

In the primitive period, technology that humans had at their disposal was primitive. There was axe, there was the wheel and some weapons of war. Hence, the extent to which humans could exploit the environment was limited. Technology kept changing with time, and a landmark change happened during the industrial revolution in Europe. Since then, technological growth has been rapid, and man is all-enthusiastic to adopt new technologies to be in greater control of nature.

If rapid technological growth is that harmful for our natural environment, why do we use it ? A host of factors are involved in this; some of which are :

1. **Diffusion of responsibility :**

You see the impact, still you engage in environment-degrading behaviour. A major reason for this is that an individual weighs the advantages of not using the technology with the advantages of using the technology. The advantage of not using the technology is a *collective* one but the advantage of using the technology is a *personal* one. For example, you are prompted to conserve energy by switching off light when not in use. The advantages of conserving energy is collective, but the advantages of consuming energy is personal. This leads to a **social dilemma :** whether to conserve energy or enjoy extravagantly that energy. In case of collective responsibility, a diffusion of responsibility happens. An individual may reason that if she uses technology incessantly, she benefit personally; and since others are showing conservation behaviour, she also benefits from the collective benefit of less pollution. Problem is, when all individuals start thinking this way, the personal benefit of each is less than the collective loss in term of environmental degradation.

2. **Risk Society :**

Sociologist Ulrich Beck had forwarded the concept of risk society to explain the dominant attitude of modern society. We use technology and are aware that:

(i) Given the rate at which we are exploiting nature, it is not sustainable in the long term and

(ii) the side effect of many technologies is pollution.

Still we use these technologies. We take the risk of using these technologies. People hope that new technology will be invented that will better exploit the environment in the future, and be less polluting.

For instance, we are incessantly using petrol as a source of energy. We have developed technologies to harness oil from land and from sea-bed. We have technologies to drive vehicles using oil. As the oil resources get depleted from earth, we don't stop using it. Rather, funding for alternate sources of energy has increased. We have developed nuclear power plants to replace oil sometime

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in the future. Now that we know the uranium reserves are limited, we are researching on finding technology for fusion power plants that will use hydrogen to get very high energy.

In every step, we humans are taking risk. Nuclear power plants are more risky than thermal power plants. A small security failure in nuclear plant can lead to large-scale disasters. The waste products of nuclear power are toxic and non-biodegradable. Mere exposure to these waste products leads to genetic changes in a human. Their disposal is a bigger challenge than the waste products of thermal power plants (pollutants like carbon monoxide, carbon dioxide etc.)

3. **Habit :**

Behaviourist psychologist Hull had stated that motivation to show a behaviour is the product of habit strength and drive. If a behaviour is habitually elicited, the habit strength for that behaviour is high.

Now consider yourself. You have been born and brought up in a society, where technology is used in every step. In urban places, you have always travelled in buses, cars, and bikes. Your lifestyle is a comples of technology. You can't do without air-conditioning in summers. Now-a-days, you can't even manage without a mobile phone (which is toxic and non-biodegradable once you stop using it and move on to your next phone). These are some habits we can't give up. Our grandparents could happily commute using bullock carts. But we can't do without using motor vehicles. We don't have the patience to do so... we live in a world with different levels of perception regarding life style. Technology that you have grown up with affects your perception. The need of the hour is conservation behaviour; sustainable development can only happen if simple living is practised. But our habits make us dependent on environment unfriendly technology for living.

Now let us turn our attention to some impacts of **man-made interventions** in environment. Some of these are :

1. Pollution
2. Disasters
3. Depletion of resources
4. Depletion of forests

What is important from a psychological sense is that all these impacts directly affect human life. Man-made disasters like the Bhopal gas tragedy severly affect the life of people. Not only this, disasters have been found to lead to anxiety, post-traumatic stress disorder (PTSD) and depression etc.

n Conservation Behaviour

By now, I guess you have an overview of the psychological effects of environmental stressors on human behaviour and effects of human behaviour on environment. Put simply, this is a E – B – E pattern, that is, environment (E) affects human behaviour (B), wich in turn affects environment, and the process goes on. The area of concern for us is that humans show behaviour that is environment degrading behaviour; we extravagantly consume energy, water and other natural resource and we use technologies that pollute the environment. For a healthy person-environment relation there is a need to promote **conservation behaviour** among people.

Why do we need to promote conservation behaviour among people ? Why doesn't it come naturally to people ? This is because, when people contribute to a social cause, they do not get immediate rewards. For instance, the incandescent bulb consumes much more energy

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than compressed fluorescent lamps (CFL). But CFL is costly and an individual may not see any direct benefit of using CFL. Platt's (1973) **theory of social trap** states that when immediate rewards overpower us, we may even indulge in self destructive behaviours.

Some possibilities of behaviour with respect to the environment, according to me, are :

1. Conservation behaviour as part of social and *religious norms*. For example, in some tribal social of India, felling of trees is considered a religious offence. Trees are considered sacred and conserve.
2. Conservation behaviour due to *morality*. Some people feel morally responsible to show conservation behaviour.
3. Environment degrading behaviour because of *lack of awareness* of environmental degradation.
4. Even when aware of the problem, one may not show conservation behaviour as she may not be able to relate conservation to her personal needs. For instance, the air pollution in your city may bother you, still you use an inefficient, old scooter to drive.
5. You may be facing a *social dilemma*.

Let us discuss **social dilemma,** in detail, in the context of conservation behaviour. We know that before acting out a behaviour, people take *decisions* based on many *subjective judgments and calculations* about the benefits of the behaviour. Social dilemma is a dilemma you face in taking decision between acting for personal interests and acting for long-term community interests. Take the example of taxation. If you don't pay tax, your personal benefit is that you save the money. The tax collected is used for community services like health, police etc. If many people evade tax the way you do, these services won't be available, and if available won't be of necessary quality. By this, you may be worse off.

Very similar is the social dilemma in case of environmental behaviour. Before performing a behaviour (say buy CFL), you wonder if the benefit are greater. If you think that the collective benefit is more than personal benefits of not buying CFL (save money), then you decide to buy CFL (which is a conservation behaviour). If you find the personal benefits of not buying CFL more; you keep using environment degrading fluorescent lamps.

Interventions

Some psychological suggestions to promote conservation behaviour are :

1. *Awareness* generation
2. Increase *rewards* for conservation behaviour.
3. *Penalty* for anti-environment behaviour should be prompt and the delay between behaviour and penalty should be low (Platt, 1973).

Ecological awareness is, according to Uday Jain and M.N. Palsana (2004), the first step for any action against environmental degradation. Awareness of environmental problems foster positive attitude towards conservation. For instance, higher levels of awareness to vehicular pollution has been found to be associated with an extremely favourable attitude towards reducing pollution (Mathur and Vohra, 1991).

School-based awareness creation is a potent strategy to increase level of awareness. This is because the level of awareness depends on personal values. Prakash and Singh (1991) have found that values such as humanism, materialism, orientation, outcome and work orientation have a strong relationship with ecological awareness. Such values should be promoted in schools, while including environment-related issues in the curriculum.

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Psychology Applied to Socio-Economic Development

13. Community Psychology
14. Psychology and Economic Development

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13 Community Psychology

- Concepts in Community Psychology
- Social Change
  - Effective strategies for social change
  - Human factors in social change
- Use of small groups in social action
- Leadership for social change
- Group decision-making for social change
- Arousing community consciousness and action for handling social problems

Concepts of Community Psychology

'Community' refers to a set of social relationships based on something which the participants have in common: usually a sense of identity. Usually, it is used to refer to rural and semi-rural regions and homogenous neighbourhoods in urban areas, where social solidarity among members is high. Community Psychology is a branch of applied psychology that involves working at a community level.

Hence, community psychology encompasses many fields of psychology related to the role of the community. Historically, the concept originated in reaction to the hospitalization model of treating mental health problems. It was found that in many cases of mental health problems, **hospitalization** and **medication,** infact was detrimental to their health. Hence, a strong movement evolved for treating mental disorders in community based support systems. From this beginning, community psychologists started conducting interventions in communities for solving other social problems.

In Indian context, a major focus of community psychology has been social change and development. At independence, an ambitious programme called the Community Development Programme (CDP) was started by the State. The programme was designed by economists and touted to be a programme to mobilize the villages which were seen as the prime force of India's development. It failed miserably. Since then, many psychologists have been involved in providing research conclusions with regards to what the right path of development is. The first ever psychologist to attend to the challenge of social change was **Prof. Durganand Sinha.** Prof. Sinha, father of India's community psychology movement, made a classic analysis of the CDP in his book "Indian Villages in Transition" (1969). He reasoned that the Indian economists who had designed CDP had used an overtly **top-down approach** and had ignored the **human factors** in social change. Sinha, infact, even drew a need-structure of villagers by using various measures for assessing needs and aspirations of villagers (1966).

In recent times, many psychologists have

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taken an active interest in community-based approaches to social problems and social change. At this point, it is apt to discuss certain points relevant to community psychology :

1. Community and Mental Health :

Behaviour is a product of interaction between person and environment. Hence, mal-adaptive behaviour is result of improper person-environment fit.

B = f (P, E).

Clinical psychologists often concentrate on the Person factor (P-factor) to correct maladaptive behaviour. The inherent flaw in the attitude of clinical psychologists is that individual differences exist. Some people are more deviant than others and hence wide variations in p-factors exist. Rather than correct the p-factors by hospitalization, the environmental factors (E-factors) can be made more accommodating. In deed, many mental problems happen because of rigid environmental conditions. For example, mental problems are more prevalent among lower socio-economic status(SES) people because of the deprived environment they live in. Rigid expectations by family and community often result in maladaptive behaviour.

Community psychology uses a philosophy different from that of clinical psychology. It believes that proper person-environment fit needs to be achieved to treat mental disorders. While clinical psychologists try to 'treat' the person, community psychologists try to make the environment (community and family) more flexible, accommodative and sensitive. Hence, instead of hospitalization, community psychology prefers community support centres to treat mental problems.

Many field studies have proved that community based interventions are more effective than traditional medical model. This is primarily because of the following reasons (Kool and Agarwal, 2006) :

i) Patients and their families are able to override the stigmatising effects of institutionalization.

ii) Allowing patients to stay in the community keeps intact the social support system which are important for the maintenance of sound mental health. Institutionalization breaks the linkages with family and friends.

iii) Community based treatment is much cheaper than institution based therapy.

iv) The penetration of mental health services would also increase because many people who do not seek professional help for fear of stigma can get treatment. Specifically in the case of women, it has been seen that they have greater mental problems in India but get fewer opportunities for treatment. This method can increase the reach for such women.

Community mental health programme aim at the 5 A's – availability, accessibility, affordability, acceptability and assessment. (WHO, 2001).

2. Social Change and Development :

Development means *planned* social change. It is a value-biased concept used by economists because economists believe that by economic planning, progressive social change is possible. It is value-biased because the social change is not planned by members of the society/community but by external agents such as policymakers and economists. The ideology of development refers to a belief about what should be the action plan for

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social change. It is not determined by people but by policy makers. In short, the ones whom we seek to modernise by social change aren't consulted when determining what is good for them !

Hence, psychologists prefer the more value-neutral term **social change** over development. Community psychologists work on the philosophy that in any change the central figure is the individual for whose benefit change is sought. Unlike machines, individuals can't be controlled. Rather, they are the source of creation and hence are *active agents* of change. In contrast to economists, psychologists prefer a bottom-up approach to social change due to this reason. While the dominant ideology of development believes that technology drives fast modernization, Prof. Sinha (1969) points out that '**humanology**' is more important !

3. Concept of Social Energy :

Social energy is the key to understanding social action. **Fossil energy** drives a **car.** Motivational energy drives individual behaviour. But then what about collective behaviour like social movements ? These collective behaviours (i.e. social action) are driven by social energy. There are three steps to the creation of social energy (J.B.P. Sinha, 1990) :

a) Experience of extreme social deficit,

b) Outcome efficacy i.e., belief that it is remediable,

c) Social efficacy i.e., disposition of social group to take initiative.

Prof. Jai B.P. Sinha argues that Indians are of collectivistic orientations and hence are embedded in groups and collectivities. Social energy easily develops in such groups. How then can Indians be called fatalistic, and dependence prone ? Social arousal (i.e. Social energy) is more oriented towards traditional action (such as engaging in rituals, following one's ancestral occupation etc) than modern social action. Groups in India can be aptly mobilized on the lines of religion, customs and tradition. Indians show dependency because inspite of the presence of social energy, it is used in traditional social action rather than modern social action. Think, how effectively can social problems like drug abuse, alcoholism, fertility behaviour and environmental degradation be solved if people are mobilised to collectively act towards removing these problems from their community !

So, what is the solution ? Prof. Sinha believes that the **social energy** needs to be *redirected*, i.e. channelled towards progressive social action. How to do this ? By mobilizing people using traditional symbols and cultures towards solving social problems and towards development. Take, for instance, the case of Mahatma Gandhi. No leader before him could become a mass leader. No leader could mobilize the rural population of India, the way he could for the national movement. National movement was a **modern, social action** aimed at formation of a free, democratic society. Yet, Gandhi used many traditional symbols and Hindu rituals to mobilize people. He claimed that he wanted to establish a "Ram Rajya" and frequently quoted from the Gita.

Hence, the potential for social action is there in Indian collectivities. The social energy is, however, traditionally oriented. The local leaders and community psychologist need to *channelize* this social energy towards modern social action by creating interventions that are sensitive to local traditions and customs.

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Such interventions, when conducted through **local leaders,** are more effective. P. Mehta (1983) has narrated a case of tribals of a village who were mobilized by local leadership to implement development sciences for the village. Co-operatives and Panchayats work successively in many parts of India (P. Mehta, 1978) primarily because members of these institutions and local citizens know each other personally; panchayat leaders are revered by tradition.

4. Community as a social system :

If you seek to find ways to remove social problems and make developmental designs for a community, you need to understand various institutions and individual factors that stabilize the society. By analyzing the community as a social system, we can know the sub-systemic factors that reinforce and sustain this system. One such system has been proposed by Prof. Udai Pareek (1970). Prof. Pareek claims that behaviour (B) is a result of motivation (M) and value (V), which in turn are caused by the social system (SS) in which the individual lives. The paradigm is represented as :

$$(SS) \rightarrow (M, V) \rightarrow (B).$$

These values and motivational patterns are produced by social system and in turn help maintain the social system. Hence, the social system attains stability. This system have been represented by Pareek as :

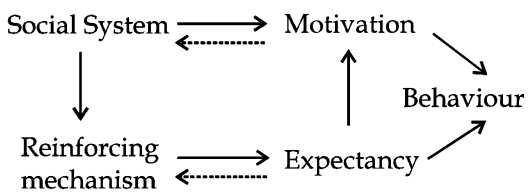

Fig: Pareek's model of Social System

Reinforcing mechanisms are central in this model. These mechanisms reinforce not only the social system but also level of expectancy and motivational patterns. These mechanisms include child rearing practices, the school system, and other institutions of socialization. By socialization, expectancy is passed from one generation to another. By this, expectancies of motivational patterns are institutionalized and routinized.

Conceptualizing the community as a system helps us in understanding the factors that resist change. Also, the model proposed by Prof. Pareek links the *social system* to *individual processes* like motivation and expectancy and ultimately to individual behaviour. This model can be used in studying individual behaviour in systems that are change-resistant, like 'culture of poverty', impediments to development and economic growth and institutionalized gender differences in society. This model has been applied in various chapters relating to above issues.

n Social Change

Society can be viewed as a system, with various reinforcing mechanisms that sustain the system. The primary reinforcing mechanism is socialization that helps the individual internalize social values regarding expectancies. Take the case of an Indian village that is basically a feudal system, divided into various castes. By the process of socialization, a belief in karma and bhagya are internalized by an individual, due to which he develops a fatalistic attitude. Renowned social scientist **Max Weber** (1958) had observed that the belief in Karma and bhagya is a major reason for India's under-development. Karma is a philosophical construct that states : *do your work without expecting any reinforcement.* This value system discourages

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expectancy and thereby motivation.

Another feature of the village community of India is the caste system. Though sociologists have shown that it is a dynamic entity, the caste system with its rigidity and exploitative hierarchy has sustained in India from time immemorial. How it has been able to do so will be an important lesson for any social change analyst.

Prof. Pareek observes that 'as in any traditional society, a section of people in India are underprivileged and discriminated against by those who have enjoyed power for several centuries. The classes that have been socially disadvantages are the low castes and low caste tribes, and other backward classes, including women. In the highly structured society of India, the expectancy framework was clear and well-defined. People who belonged to the under-privileged classes were expected to limit their aspirations to the activities and vocations appropriate to their particular class' (1970).

For example, son of a barber neither get opportunity to become a priest nor had aspirations to become a priest. This kind of rigid expectancy 'produced behaviour that made social change among these people almost impossible" (Pareek, 1970).

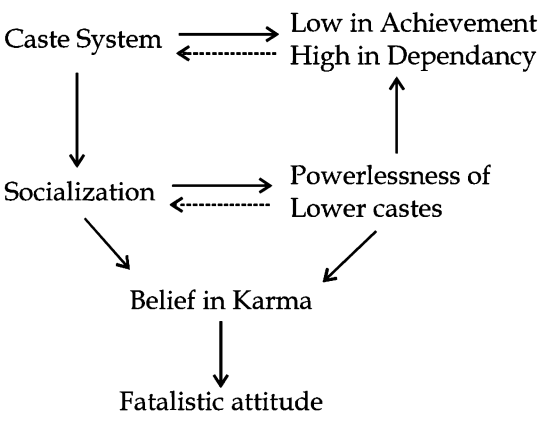

Figure : Resistance to change by caste-based society

Effective Strategies for Social Change

Development economists and community psychologists differ widely in the strategies that they advocate for social change. The falacy in strategies adopted by economists was exposed in community development programme (CDP) and other such programmes for planned social change. Basically, these strategies always ignored the **human factors** in social change. Rather than focussing on changes in attitudes, motivations and social norms of human factors, their focus was on introducing modern technology and infrastructure. As Woytinsky (1957) rightly observes, the main source of India's weakness lies not in lack of innate abilities or technical skills of the people, but 'a lack of initiative, of interest in improving their economic status'. If we transplant overnight 'all the factories of Michigan, Ohio, and Pennsylvania to India without changing the economic attitudes of her people, then decades later the country would be as poor as it is now. On the other hand, if by some magic the psychology of 150 million employees, self employed persons and employees who constitute India's labour force were overnight transformed. India would be covered two decades later with modern mills, power stations, and speed highways, and her per capita income would have increased many times despite scarcity of domestic capital' (Woytinsky, 1957).

In the light of above arguments, psychologists have reasoned that only way to effect social change is to **mobilise** people for social action and social change. No one can change me if I don't want to change! The Community Development Programme (CDP) failed because it was a top-down intervention that seeked to change society by rewards and punishments. The spirit of social change was not internalized

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by the people. In the light of these facts, psychologists recommend certain alternate strategies for social change :

1. Channelling of Social Energy :

As seen in page 258, the potential for generation of social energy is there in Indian collectivities. Social energy 'inately' develops in collectivistic societies like India. However, channelling that towards fulfilling **social goals** is a challenge. The energy can be channelled towards fulfillment of social goals primarily by three kinds of agents :

a) The local leaders
b) The panchayat organization and
c) The community psychologists

A leader, because of his stature and acceptance, can articulate the need for social change in terms of traditional values. In my village, many orthodox parents sent their daughters to school for education after a 'fakir' (a travelling mendicant who was immensely respected) claimed that by doing so they would serve Goddess Saraswati ! Similarly, Gandhi mobilized the whole nation claiming that by overthrowing the British, he would establish "Ram Rajya". Village Councils like Panchayats provide institutional support; these councils are composed of individuals who are part of the community and hence have better rapport with the locals. A crucial agent here is the community psychologist, or the trained paraprofessional in her absence. Community psychologists, due to their strong background of theoretical research, can study the need structure of the community and identify various needs of the community. They provide the leader with a rich research-based knowledge and facilitate the process of social change.

2. Changing Motivational Pattern :

The self-sustaining social system (SS) affects individual behaviour (B) through motivation (M) and value (V)

$$(SS) \rightarrow (M, V) \rightarrow (B)$$

Hence, to break the vicious cycle an appropriate strategy is to change motivation of the individuals. According to Pareek, there are three factors responsible for development (i.e. Social Change) (1970). This he represents by the formula :

$$D = AM \times EM - DM$$

where D = Development
AM = Achievement Motivation
EM = Extension Motivation
DM = Dependence Motivation

It has been seen that as in other traditional societies, Indian communities are characterized by high levels of DM and individuals have low AM and EM. While achievement motivation has been popularized by McClelland's theory (see chapter 11), EM and DM are also important concepts to be looked into. High dependence motivation leads to a fatalistic attitude, lack of initiative, fear of failure and low risk taking. Extension motivation refers to motives that orient the individual towards cooperative relation with others. In a country like India, one individual can't possibly progress all by herself. Rather, cooperative development of all members of community is an effective strategy for social change. Hence, the need to increase extension motivation.

Many training schedules have been devised on improving achievement motivation, many inspired by McClelland's Kakinada experiment. Dependency needs can be decreased effectively by making use of sensitivity training wherein people

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experiment with new patterns of behaviour and develop inter-dependence in place of dependence (Pareek, 1970). Prof. Pareek observes that extension needs can be increased by training on the lines of Sherif's Robbers Care Experiment (see chapter 9) and setting super-ordinate goals.

3. **Small Groups :**

Small groups are effective means for weak individuals to come together and improve their social efficacy. Many factors underline the importance of small groups as an effective strategy for social change. These have been detailed in another section of this chapter.

4. **Institutional Support :**

After the failure of large-scale developmental programmes like Community Development Programme (CDP), many scholars have asked : What is the role of government ? Well, government has a large role to play as a support system. Rather than top-down approach, government needs to decentralize policy making and make the community members participants of social change process. Om Prakash (1984) conducted a study in two villages where the issue was development. In one village, the villagers took decisions and the outcome of the initiative was positive. In another, a NGO took decisions. The initiative failed. This emphasizes the superiority of bottom-up approach.

Also, appropriate sensitivity towards the socio-cultural milieu is necessary. S.C. Dube had observed that 'many programmes are rejected not because the people are traditionally minded, conservative, or 'primitive', but because the innovations, in all their ramifications, do not fit into the total cultural setting of the community'. (1958)

5. **Role of Women :**

Women are essential agents of change. Yet, they are often neglected in the change process. Sonalkar (1975) has cited the case of some Adivasi women who had acted to banish alcoholism from their village. Similarly, a field study by focus on children under six (FOCUS) found that Infant and Child Development Scheme (ICDS) is more successful in Tamil Nadu than other states. Economist Jean Dreze, associated with FOCUS, believes that it was because of women's participation in ICDS in Tamil Nadu.

The importance of women in social change is being increasingly felt; many women-based small groups are being constituted for various social goals. For example, the renewed Sarva Shiksha Abhiyan (SSA) talks of Mother-Teacher Associations (MTA) and about entrusting the responsibility of mid-day meals to mothers !

Human Factor in Social Change

The focus of development programs since Independence has been on social change in the village community. The strategy adopted in these planned social change interventions was to provide technological and infrastructural support to rural folks (farmers, entrepreneurs, small groups etc.) with the hope that these modern technologies will bring about rapid rural change. The flaw in this thought was that the government couldn't understand that there are two factors involved in economic growth and social change : *technology* and *humanology*. All these programs (such as Community Development Programme, Integrated Rural Development Programme) failed because of the prime reason that the individual farmers in the village were not ready to accept change. A pre-

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requisite before undertaking social change is to understand the members of the community (i.e., the human factors) you seek to change. We will not make the same mistake that successive economists in charge of various five-year plans made. Hence, in this section, I seek to provide a sketch of the rural man; the rural farmer and the village entrepreneur; their motivational features and attitudes.

Durganand Sinha, arguably the foremost researchers on Community Psychology in India, reports that the vast majority of rural people lack the urge for growth and are lethargic and indifferent to material progress (1984). The perceived basic needs are primarily food, clothing and shelter (Muthayya, 1982). The humans in various villages of India are more motivated by instant gratification than delayed gratification. In the midst of such a situation, researchers have found that most farmers are resistant to change. Only a few are change-prone farmers. What are the characteristics of change resistant and change-prone farmers ?

Change-resistant People : Change-resistant farmers are those farmers who are unwilling to change their traditional occupations. They are the ones who don't adopt innovations. They don't accept new technologies and hence can't benefit from various development programs. Some characteristics of such farmers are :

1. Their **aspirations** are limited to the *satisfaction of basic needs*. Their expectancies are limited. Hence, even if a new technology or a new employment opportunity provides better remuneration, they don't get motivated to change over from their traditional occupations.
2. They have **high fear of failure**. Adopting a new technology, for example, is always risky. Although the government provides soft loans to buy new machinery and HYV seeds, these change-resistant farmers don't take the risk. This is because they have a very high fear of failure.
3. These farmers' **belief system** is dominated by *traditional beliefs and attitudes*. They often lack empirical knowledge on their subjects of interest (Alexander, 1982).
4. They have a very *low awareness* of community problems. In deed, these people don't consider the village society as a community. Rather, they recognise their family, kinship group or jati (caste group) as the community. Naturally, they are resistant to any change that demand a partnership of all castes in solving the problems of the village community.

Change prone people : Many psychological studies have tried to sketch the profile of people who have a positive attitude towards change. They are not status quoists. In comparison to the change-resistant people, they have some typical psychological characteristics :

1. They have a *realistic level of aspiration* (Hundal and S. Singh, 1980).
2. They are high on *adoption behaviour* i.e., they are more likely to adopt new innovations. For example, a change-prone individual would send his daughter to school if this facility is available. A change-prone farmer would accept new technologies in his farm.
3. They are better educated, intelligent, show more manual dexterity and less emotionality than change-resistant people. (Rai, 1977).
4. Farmers who are *young in age* are found to be more change prone. Further, graduate farmers have greater economic motivation, risk preference, and innovativeness compared to non-graduate farmers. In deed, illiterate farmers are more fatalistic than literate ones (Hiriyanmaiah and M.K.S. Rao, 1963).

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5. Significant positive relationships have been observed between change proneness and need for achievement, risk taking and aspiration score (P.S.N. Tiwari, 1980).

The above profile of change-resistant members of a community and change-prone members helps us get an insight into the human factors involved in social change. There are many other factors, such as technology, governmental interventions, infrastructure, knowledge of these new technologies, availability of capital etc that affect social change. However, all these factors can't lead to change (or development) unless the human factors accept it. Any attempt at changing a community needs to necessarily consider the members of the community and human factors like attitude, motivation, beliefs, values etc. A majority of people are change-resistant. They are steeped in tradition and ritualistic behaviour (such as superstitions, sacrifice to God for better rain etc). These people can be cajoled to adopt change only if they find the agents of change congruent to their traditional beliefs.

n Small groups in Social Action

Small groups are informal, face-to-face, primary groups. Small groups were 'discovered' for the first time in **Hawthorne studies.** Though small groups are as old as human society (even older), they were 'discovered' in the sense that the role of small groups in social and organizational action was empirically seen for the first time in the Hawthorne studies.

Small groups can be formed automatically or they can be intentionally formed. Research conducted by community psychologists and organisational psychologists in last few decades have brought to the fore the fact that small groups can be formed and used for effective social action and to effect social change. Some of the features that make the small group a potent tool for social action are :

1. Generation of social energy
2. Advantages of group decision-making
3. Role of group norms in social change
4. Risk-taking behaviour and
5. Higher extension motivation.

1. Generation of social energy :

For any social action to take place, there is a need for social energy. Social energy is best generated in small groups. Because of the informal nature of group interaction, **(a)** problems are better identified and articulated, **(b) social efficacy** about their ability to mitigate the problem develops early; **(c) Expectancy** of a better future exists.

Above steps are the preliminary steps of any **collective action.** Hence, social motivation for action is best developed in small groups.

2. Advantages of group decision-making :

There can be no social action without a collective decision taken towards fulfillment of certain social goals using specific means. Because of the face-to-face relation in small groups, decisions are collectively taken. Such group decisions are more effective than decisions taken by a government functionary or an NGO or a social change activist as every member takes individual responsibility for implementation of the decision. As the individual is part of decision-making process, she can't oppose the decision at a later stage. In one study (Om Prakash, 1984), two villages wherein development initiatives were being taken were studied. In one, developmental activities were initiated by the locals collectively through small groups.

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In another, decisions were taken by a voluntary organization. The former was found to be much more successful than the latter.

3. Role of group norms in social change :

It is said that social norms are very hard to change because these are internalised by the individual during socialization. The most persistent way to bring about social action towards a favourable social goal is to change social norms. But it is not that easy to change social norms of a community. For example, paying dowry during a marriage is a social norm. It is not easily challenged because if any parent challenges the norm, he faces social boycott and stigma. He is looked down as a deviant. Also, being an age-old practice it is widely considered legitimate.

From the Hawthorne studies, Mayo had found that small groups develop their own norms. This fact has multiple implications :

(a) Group norms can spread to society and change social norms.

(b) Group norms can control and discipline individual members in ways that even legal authorities can not.

Individuals behaviour is motivated more by group norms than simple reward and punishment. This is the reason why in the Hawthorne studies workers weren't motivated by monetary rewards; their performance was contingent upon group norms.

4. Moderate Risk-taking behaviour :

A major factor that empedes social change and economic development in our traditional society is the very low level of achievement motivation. Basically, individuals are more dependence-prone, lack initiative and have high fear of failure. As a result, they show very low risk-taking behaviour. Small groups help in increasing the risk-taking potential of individuals. But how ? We know from theoretical research that **polarizing effect** happens in groups due to which decisions taken in groups are more risky than the decisions of individuals. Groups are prone to take riskier decisions due to diffusion of responsibility. Hence, in groups the low risk-taking behaviour gets converted into moderate risk-taking behaviour.

In groups, there is a diffusion of responsibility. Decision become less conservative because responsibility for negative consequences will be shared. Fear of failure decreases and this prompts members to approve of bold decisions for social action.

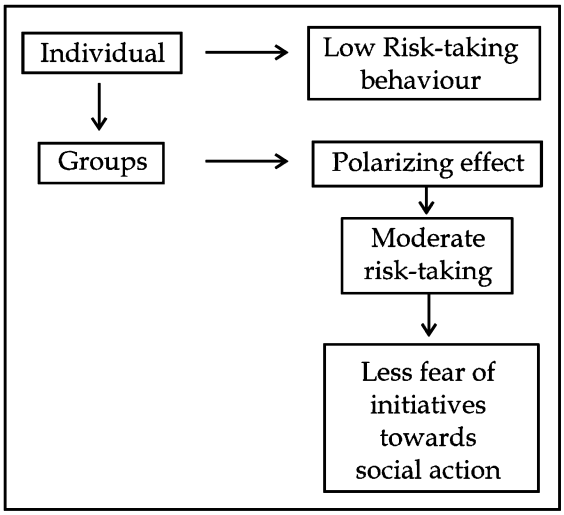

Fig. Dynamics of group decision-making

5. Economic Behaviour :

Small groups have been found to be especially effective for economic development.

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As seen above, moderate risk-taking behaviour develops that promotes achievement orientation.

Also, D = AM × EM – DM and small groups increase extension motivation of a group. Extension motivation bring the motivation for developing with consideration for compatriots. EM increases in small groups. Since member of small groups cooperate towards fulfilment of a common goal, extension motivation is high in these groups.

Situating Small Groups

Small groups have become popular because of their ability to effect social change. Small groups are being used in social action to bring about economic development, to better the condition of poor, to rid society of social ills and to change age-old norms. For example, self employed women's association (SEWA) forms small groups of women for entrepreneurial ventures. Small groups have more efficacy to take moderate risks than individuals.

n Leadership and Group Decision Making

In any social interaction, some people have more power than others. Here, power refers to ability to influence others. In a village community, the role of local leaders is paramount to effect social change. These leaders have the ability to influence the community members for collective social action. Prof. J.B.P. Sinha argues that since Indians are collectivists, groups in India are quite conducive to generate social energy (discussed earlier in this chapter). The leader, because of the influence and respect he has, can give a direction to this social energy. The leader identifies the social energy and the potential collective action that this energy can lead to. Further, he channelizes the social energy towards behaviour conducive to social change.

So, who is a good leader in Indian context? To understand this, we need to understand the types of influences a leader can have on followers. Using Helman's distinction (1958), it can be said that there are three types of influences : Compliance, Internalization and Idenficiation.

- **Compliance** refers to a surface change in behaviour of the follower, without any changes in underlying attitudes and values. It happens because the follower's behaviour is motivated by rewards or punishment that the leader has ability to give.
- **Internalization** means subjective acceptance that produces true internal change; the norms set by the leader become an internalized standard of behaviour. There is genuine support for the leader's proposals as they are suited to the followers' values and beliefs.
- **Identification** is based on the leader's attractiveness to the followers, who imitate the leader's behaviour and attitudes to gain her approval.

Coming to a community setting, there are three major types of leaders affecting the community :

1. Officials of bureaucracy
2. Traditional leaders
3. Charismatic leaders

Officials refers to those leaders who have been appointed by the state. These officials derive their authority from a rational legal constitution. The District Magistrate (DM) and Tehsildar are examples of this kind of leaders. Problem here is that they use *only compliance* as

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a tool to influence the community. They use only reward and punishment to change the behaviour of community members. Rather than lead to social change, this may infact increase dependence and lead to a *saviour's syndrome* where an individual takes no initiative and prefers to be directed. The point is that there is no change in the underlying attitude of people.

Traditional leaders are those who are respected by tradition. Fakirs, temple priest, Tantriks (experts in black magic), the local school teacher and panchayat members are examples of these leaders. They influence by way of both compliance and internalization. **Panchayat** is a local leadership which is traditional and has been bestowed with legal power by the constitution.

It has been seen that traditional leaders are more effective than officials. This is because of numerous reasons :

1. In India, the government is modern and rational but the village community is steeped in feudal mentality. Hence, a leader with traditional authority is best suited to influence people.
2. Traditional leaders influence followers by internalization. Hence, there is a change in attitude of followers.
3. Traditional leaders are part of the community and hence better understand the needs and abilities of the community. While officials use a top-down approach to social action, traditional leaders use a *bottom-up approach.*
4. Indians are rooted in traditional values and norms. Any attempt to mobilise them needs to make use of these traditional beliefs and values. Traditional leaders do it better than District Magistrates and Tehsildars as these officials aren't from the community.

Using above argument, it can be pointed out that many early developmental programmes (such as CDP) failed because the officials were vested with power to provide aid and assistance. These officials use rewards to influence behaviours. Hence, the fabled *'fatalistic attitude'* of locals wasn't changed ! *The change in behaviour wasn't permanent; people ceased to show the behaviour when state aid was discontinued.* Hence, today a strong case is being made for decentralization and devolution of power to panchayats.

Charismatic leaders are superior to both bureaucratic officials and panchayats because they influence followers by identification. When followers identify with the leader, they try to imitate the actions and opinions of the leader. An appropriate example of charismatic leadership is Mahatma Gandhi. The man was able to mobilize the masses in Indian villages (who were stereotyped as fatalistic and high on dependence) for national movement. Even the most popular mass leader before him – Lokmanya Tilak – was unable to mobilize the villages.

Type of Leader	Influence of leader over people	Examples
Officials of bureaucracy	Coercion	District Magistrate and Tehsildar
Traditional	Coercion & Internalization	Panchayats and other village councils
Charismatic	Identification	Gandhi, J.P. Narayan, Lalu Prasad Yadav

Table :

Leadership types at community level

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n Group Decision-making

Though the leader has an influence over community members, she should include them in the decision-making process concerning social action. Group decision-making has many advantages over an autocratic style of decision-making. Group decisions are *more effective* than individual decisions as every member takes individual responsibility for implementation of the decision. As the individual is part of decision making process, he can't oppose the decision at a later stage.

Another advantage of group decision-making is that it leads to *moderate risk-taking behaviour*. Villagers in India have low risk-taking potential and have high fear of failure. In group decision, a 'polarizing effect' takes place i.e. decisions become less conservative. As a result, decisions taken are of moderate risks. And moderate-risk action are optimal; they are better than low-risk or high-risk tasks.

When to go for group decision-making ? The leader need not always consult the group as the process is cumbersome, time taking, and not suitable when quick decisions have to be taken. It depends on (a) Situational factors and (b) followers. The leader has to perceive which decisions demand consensus. For example, if a form of action requires cohesion and dissent is dangerous at a later stage, the leader consults the community members before taking decisions.

n Arousing Community Consciousness

The causes of social problems are social in nature. Hence, these problems can best be solved by efforts from within the society. External forces like government policies have been found to be incapable in solving problems like AIDS, drug addiction and alcoholism because they are deeply rooted in the society. It is increasingly being realized that community is the best agent for ameliorating social problems. It is, however, found that communities often lack proper awareness about social problems; then how can they collectively act to remove these problems ? Community consciousness about social problems is low; hence the need to arouse community consciousness for handling social problems.

The above can be illustrated with a few examples. Often, parents of adolescents involved in drug abuse aren't able to identify the symptoms of drug abuse in their children; AIDS is associated with many **social stigmas,** due to which many AIDS patients find it tough to live a life of dignity after AIDS. They are discriminated against on the perception that AIDS is contageous disease. Further, the health awareness of community members isn't high; as a result, they don't follow lifestyle conducive for healthy life. Sometimes, community's prejudices even aggravate a problem. For instance, it is generally believed that schizophrenics' children are also prone to mental problems. This belief reflects discriminative behaviour, which may turn a healthy offspring of a mental patient into a schizophrenia by self-fulfilling prophecy !

Role of mass media

Mass media is touted as a potent tool to create community consciousness about social problems. For instance, the government of India invests heavily in communicating messages on small family norms to the people through mass media. Have they been successful ? Psychologists believe that not all messages are successful in creating community consciousness.

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For instance, the target population may selectively attend to information that confirms their original attitude. Once a message is attended to, we selectively evaluate messages; we are prone to look favourably upon information that suggests our attitudes.

Some psychological aspects need to be taken care of while designing messages to arouse community consciousness by mass media. Individual and group differences need to be considered. Those people for whom the subject has personal relevance do *central processing* of the message; for them, the message must have rich content. Others process the message peripherally. For them advertisements with *peripheral cues* should be designed. For example, if one has to design AIDS awareness ads, she faces two target groups. Parents of teenagers find the issue personally relevant and are knowledgeable about AIDS. They would seek high-quality messages that are rich in information and logical. On the other hand, the teenagers know less about AIDS and do not find it personally relevant. For them, peripheral processing of ads is better and should be designed accordingly.

Fear has been found to be an effective tool to rouse the community's awareness about social issues. However, Mc Guire (1968) warns that minimal or extreme fear are not effective. At low levels of fear, the individual is not sufficiently aroused. At moderate fear level, attention and arousal increases as fear increases. When fear is too high, attention decreases again but this time because defences are used to deal with extreme fear. The message may be *denied* or *repressed*. Hence, the message must have moderate fear element. The above relationship can be explained by an inverted-U relation :

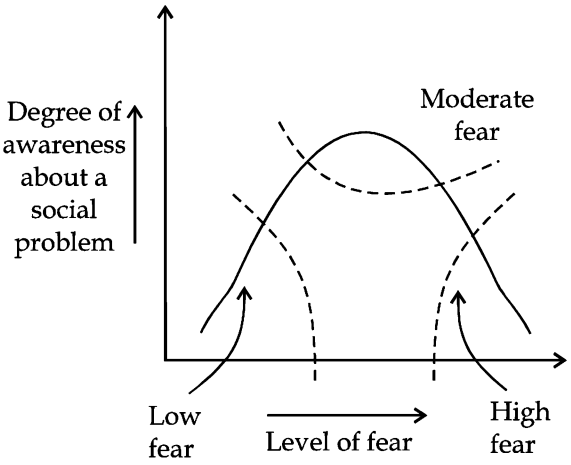

Fig. : Relation between fear and awareness, based on Mcguire

A Study as example

(Source : Passer and Smith (2007), P. 227)

In the 1990s, Tanzania in Africa faced a growing AIDS crisis that was fuelled by risky sexual practices and widespread misinformation about HIV transmission at the community and individual levels. Many believed that HIV was spread by mosquitoes : since others believed that the lubricants on condom causes AIDS. Some believed that AIDS could be cured by having sex with a virgin. Unsafe sexual contact between truck drivers and prostitutes further spread HIV.

To combat this crisis, the Tanzanian government produced and aired 208 episodes of a radio soap operate over several years. The soap operate featured three types of role models:

1. **Positive role models** were knowledgeable about HIV/AIDS, minimized risky behaviour and ultimately attained favourable social outcomes.

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2. **Transitional role models** began by acting irresponsibly but eventually adopted safer heterosexual behaviour.
3. **Negative role models** engaged in risky sex that led to punishing outcomes. For example, a character named Mkwaju engaged in unsafe sex, had unprotected sex with many girl friends and ignored warning about AIDS. Later, Mkwaju contracts HIV and eventually dies.

The program's content was designed with three purposes :

1. Create awareness that risk of contracting HIV/AIDS is high.
2. Increase the listeners self-efficacy by showing them how to control the risk and
3. Change behaviour of listeners by inducing them to have less number of sexual partners and use condoms when having sex.

In the five-year period in which the programme was aired, the effects were studied by Peter Vaughan and his colleagues (2000) in what is now considered a good longitudinal study. They found that 80% of the listeners found the program useful in increasing their awareness about HIV/AIDS.

Role of Education

Education is a means to socialize a child. As such, it has en important role to play in arousing community consciousness. Consciousness of children towards social problems is increased through information provided about these problems. For example, providing information about drug and alcohol helps in sensitizing students towards these problems.

Not only child education, adult education can also focus on awareness about social problems. Communitn Centres can be used to disseminate information regarding social problems.

Innovative Methods of Awareness Generation

Many other means can be used to create awareness about social problems. Distributing informative papers, writing slogans and street plays on social problems are also effective in rousing community consciousness. For example, take the case of Society for Theatre in Education Programme (STEP) in New Delhi. It uses street performances to entertain people between 13-25 years of age while teaching them ways to say no to drugs. This program has been chosen as an example to follow by United Nations International Drug Control Programme (UNDCP) for other NGOs in India.

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14

Psychology & Economic Development

- Achievement motivation and Economic Development
- Theory of Achievement Motivation
- Characteristics of Entrepreneurial Behaviour
- Environmental Factors in Entrepreneurship
- Government Policies for Promotion of Entrepreneurship
- Motivating and Training People for Entrepreneurship
- Consumer Rights and Consumer Courts

n Achievement Motivation and Economic Development

Achievement motivation refers to striving for success with some standard of excellence. It is a social motive, that is, the motive force varies from society to society. American psychologist David McClelland had reasoned in his books Achieving Society (1961) and Motivating Economic Achievement (1965) that a positive relationship exists between need for achievement among various societies and economic development of these societies.

In presenting his thesis, McClelland took intellectual inspiration from two people: Winterbottom (1953) and Max Weber. Winterbottom had discovered close association between child-rearing practice (CRP) and the need for achievement in children. Her inference was that mothers of high achievement groups expected their sons to be independent and self-reliant. On the other hand, mothers of low achievement groups placed ample restrictions upon their sons. McClelland was inspired by the fact that child rearing practice determines achievement motivation. He reasoned that CRP in any society is affected by the value system in that society. Hence, the need for achievement inculcated in CRPs must be manifested in folk tales that are an expression of the value system. Here, he tries to draw a relation between society and achievement motivation (AM). Based on this, he drew up a hypothesis that AM varies from society to society. To prove this hypothesis, he conducted a study in 30 different societies; he measured children on TAT scores and studied the folk tales of these countries. He tried to correlate the AM in TAT stories to the society.

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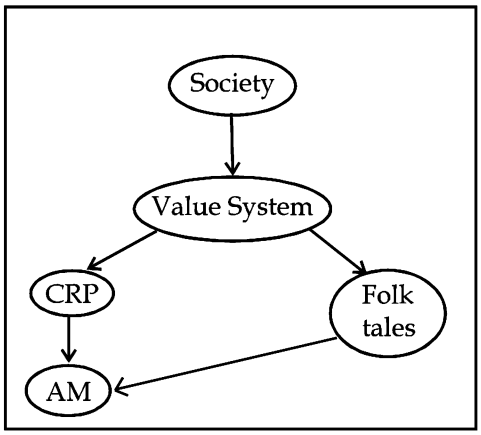
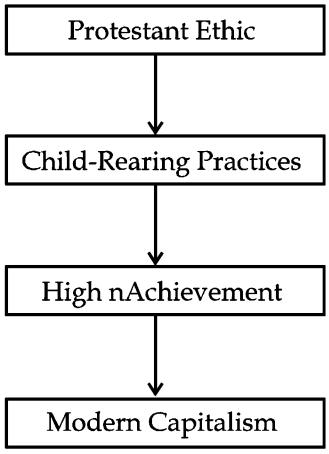


Next, McClelland proceeded to study Max Weber's thesis of *Protestant Ethics and the spirit of Capitalism*. This thesis argues that modern capitalism developed only in protestant society because of the protestant ethic. The protestant ethic is set of values that promote work as a service to God. Hence, protestant capitalists worked hard to earn profits. However, they were not motivated by profits. Rather, they reploughed the profits back into their business. Weber had reasoned that the protestant ethic had caused this kind of entrepreneurial behaviour (thrift + profit making + reploughing profits into the business) whereby profits were not an end in itself but success in business venture was. But McClelland argued that there were certain *mediating factors* between protestant ethic and modern capitalism. McClelland found that protestand parents stressed earlier independence and self-reliance in their children (McClelland, Rindlishbacher and Dechorms, 1955). Protestant parents expected their sons to do well in school, and show other competencies at the age of 6½, while Irish parents made same expectations at the age of 7½, and Italian parents at the age of about 8½.

So, McClelland reasoned that protestant ethic had an effect on CRP, which, in turn, led to rise of nAchievement level, which in turns led to the rise of modern capitalism.



From a study of 30 countries, he found that wherever TAT stories and folklores reflected high AM, the economic growth of that country was also high. In short, his thesis is based on validation of following arguments :

1. Child-rearing practices affect AM in children.
2. CRPs vary from society to society.
3. Societies where children have higher AM (as measured from TAT stories and folk lores) have higher economic growth.

Evidence

One of the greatest attractions of McClelland's theory was that McClelland believed that AM can be inculcated by training. Since higher AM is related to higher economic growth, it became a mandate for policy makers world over that to promote economic growth, training in achievement motivation helps.

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Further, this has been supported by many cross-cultural studies.

McClelland himself conducted a study with Winter (1969) at the Small Industry Extension Training Institute (SIET) in Hyderabad to show direct linkage between AM and economic activity. The research design consisted of giving 15 adults from the experimental town training on improving AM for 10 days. Kakinada in Andhra Pradesh was selected to be the experimental town, and Vellore in Tamil Nadu as the control town. The experiment couldn't be completed as per the design, but the data that they collected showed significant effect of increased AM on entrepreneurial activity. It was found that the participants of the training programme made more definite attempts to start new ventures (22% as against 8% in control group), displayed more active business behaviour (51% as against 25%), and made more specific investment in productive capital (74% as against 40%) than the control group members.

To give McClelland's theory a cross-cultural validation, many studies have been conducted in various places of the world to show that AM in deed increases economic activity.

McClelland's Theory : An Evaluation

McClelland's theory was part of a triangle of modernization theory, with economist Rostow, Sociologist Talcott Parsons and McClelland representing the three corners of the theory. Modernization theory believed that developing countries can develop the same way that developed countries did. Hence, McClelland advocated that individualistic AM should be promoted in people. Modernization theory of Parsons and Rostow have largely been discredited today because of their ideological bias. Then what about McClelland's theory ?

McClelland's theory has immense research support from many developed and developing countries of the world. So how can we discredit the theory ? D. Sinha (1984) argues that there has been a tendency among Indian psychologists, as among the psychologists of many other countries, to uncritically accept the theory. He calls it the "duplication tendency". He believes that psychologists from India as well as from other developing countries are victims of it.

In the ultimate analysis, the conditions in developed countries are far different from that in developing countries. McClelland's major error was that he thought there is a single type of AM. The nature and manifestation of AM varies from society to society. But McClelland assesses and compares a single manifestation of AM in different countries. From a literature survey, Rekha Singhal and Giriswar Misra (1990) observe that various research findings in India critically evaluating AM are 'particularly encouraging because they support differences in achievement rather than deprivations of achievement. Theoretically, [these] findings challenge the traditional, fixed, trait-based, unidimensional concept of achievement.'

Has McClelland's theory failed in India ? Yes it has. Because the conditions (social, economic, cultural, population conditions etc.) are starkly different here than in the west. Some major points of argument in this regard are :

1. Resource Availability :

America is the 'new world' with immense resource availability and a stable population. In contrast, developing countries like India have huge populations and low resource availability. J.P.B. Sinha (1968) has found that competitive,

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individualistic orientation is of limited use when resources are scarce. Competitive orientation is most conducive to development when resources are abundant, whereas cooperation is better under conditions of limited resources.

Now lets evaluate McClelland's theory in the light of this. He believed that AM, which is an individualistic motivation for excellence, is useful in competitive economic activity. When resources are abundant, such competitive economic activity can lead to fast development. But when resources are limited, and people are so many, such individualistic motivations can lead to conflict among individuals and groups.

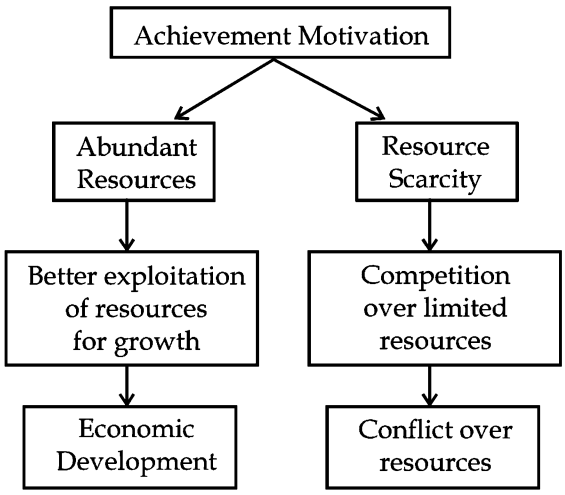

Fig : AM and resources as mediating factor

Hence, AM can in fact be harmful in developing countries.

2. Extension Motivation :

A critical analysis of the generality of McClelland's theory was undertaken by Pareek (1968). He argues that AM alone is not sufficient to promote social development in India. Rather, he believes two other motives (Extension Motivation or EM, Dependence Motivation or DM) must also be taken into consideration. EM is the concern for other people and the society. Pareek defines EM as 'a need to extend the self or the ego and to relate to a larger group and its goals'. (Pareek, 1968, p. 18-19). DM plays a negative role in development (D). Hence,

$$D = AM \times EM - DM$$

Here we see that Pareek also stresses on cooperation rather than individualistic competition. AM is, no wonder, good but uncritically we can't say that AM always leads to development. In Indian society, a concern for other people (i.e., extension motivation) is as important as AM. Individualistic achievement orientation without a concern for others won't lead to collective development.

3. Entrepreneurial Success :

McClelland had opined that greater AM leads to greater economic activity. He has assumed that greater economic activity in the form of entrepreneurship leads to economic growth. Here, he is making an assumption : that greater entrepreneurship means greater economic activity. But this is not so. For instance, Ownes and Nandy (1977) have shown that high AM may initiate a person into entrepreneurship but not necessarily make him a successful entrepreneur. Ray (1983) argues from his study in Brazil that economic success is more associated with dominance over resources.

4. Notion of Achievement :

When forwarding his theory, McClelland had made use of a specific definition of achievement. Many researchers have pointed out that McClelland's definition of achievement motivation was itself flawed ! Rekha Singhal and Giriswar Misra (199) argued that McClelland's definition of achievement is fixed,

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trait-based, unidimensional conception of achievement. The definition of concepts like intelligence, personality and self vary from culture to culture. Similarly, the notion of achievement varies from culture to culture. There are many types of achievement and McClelland's theory concentrates on an unidimensional achievement, based on the definition of achievement in his western culture.

The notion of achievement is different for different countries. For instance, Japan is a developed country with strong collectivistic orientation. In Japan, striving for success is more motivated by a concern for the reaction of others or by loyalty to one's group rather than by satisfaction of personal needs (Devos, 1968). Salili (1975) found in Iran that there is greater emphasis on intentions rather than outcomes in the culture of Iranian society. McClelland perhaps did not realize that AM is, after all, a social motive of striving for success, and success is differently defined in different cultures !

n Theory of Achievement Motivation

Achievement motivation is the tendency to strive for success in the light of some standard of excellence against which one's performance is evaluated. Following McClelland's revelation that achievement motivation is related to risk-taking behaviour (McClelland, 1961), Atkinson (1957) forwarded an '*interaction model*' of achievement motivation. This model seeks to present a formula stating the need for success and fear of failure involved in doing any task. Based on the sum-total of success motive and fear of failure, the individual take a final decision on whether to venture for a new enterprise.

There are six variables involved in Atkinson model :

1. The subjective probability (i.e. expectancy) of success : P_s
2. The subjective probability of failure : P_f
3. The incentive value of success : I_s
4. The negative incentive value of failure : I_f
4. The achievement motive : M_s
5. The motive to avoid failure : M_{AF}

Lets say you want to open a book store in Old Rajinder Nagar Market, New Delhi. Will it work ? You have some expectancy of success (P_s). At the same time, you also evaluate the probability of failure (P_f). Both P_s and P_f are subjective quantities because they are your expectancies, not objective probabilities. Similarly, what is the incentive of success (I_s) ? What may be the fallout of failure (I_f) ? Finally, there is always a fear of failure. What if your venture fails? You will be denounced as incompetent, or a loser. Hence, there is a motivation to avoid failure (M_{AF}). If this motivation is very high, one has a tendency to avoid work, fearing that negative outcome of the work will lead to negative comments from others.

The overall motivation in Atkinson's model has two components : the *tendency to achieve success* and the *tendency to avoid failure*.

The tendency to achieve success

The tendency to achieve success is represented by the formula :

$$T_s = M_s \times P_s \times I_s$$

M_s is a relatively stable characteristics of the person. P_s and I_s are the person's perceptions about the particular venture.

Escalona (1940) and Festinger (1942) had observed that accomplishment of a tough task is always more attractive to a person than the accomplishment of an easy task. Based on this

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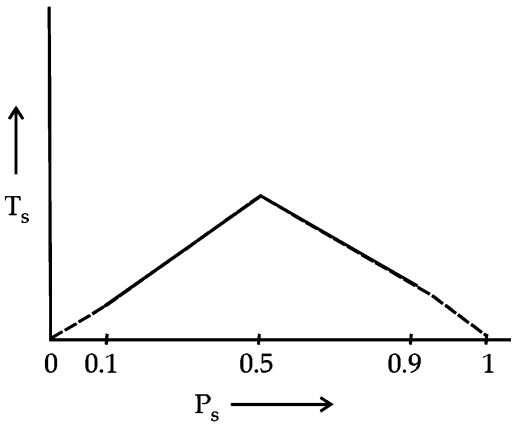
rationale, Atkinson argued that $I_s = 1 - P_s$. As a result, the formula becomes $T_s = M_s \times P_s \times (1 - Ps)$. Two implications of this formula are :

1. The tendency to achieve success (T_s) is strong when a task appears to be of intermediate difficulty. This is because the product $P_s \times (1 - P_s)$ is maximum (0·25) when P_s is 0·5. If the difficulty is very high or very low, T_s is low. For example :



   where $P_s = 0.1$ (very tough task), $T_s = 0.1 \times 0.9$, $M_s = 0.09\ M_s$. Similarly if $P_s = 0.9$ (very easy task), $T_s = 0.9 \times 0.1 \times M_s = 0.09\ M_s$.

2. When the task difficulty P_s is held constant, the tendency to achieve success is directly proportional to achievement motivation M_s.

An implication of the formula is that people high on achievement motivation will prefer to go for tasks of intermediate risk. They don't approve of easy task and consider tough tasks unrealistic.

The tendency to avoid failure

In contrast to the tendency to achieve success, this is the capacity to react with shame and embarassment when the outcome of task performance is failure. This is represented by the equation :

$$T_f = M_{AF} \times P_f \times I_f$$

Atkinson argues that the expectancy of failure (P_f) is strong when the expectancy of success (P_s) is weak, and vice versa. Hence,

$$P_f = 1 - P_s$$

Also, another hypothesis by Escalona and Festinger states that shame and embarassment of failure is greater when the task failed in appears easy. On the other hand, if you fail in a very difficult task, the shame and embarassment is low. From this hypothesis, Atkinson argues that the repulsiveness of failure (I_f) is related to the difficulty of a task (P_s). Hence, he assumes the $I_f = - P_s$.

In other words, if a task is very easy, the probability of success is high (say $P_s = 0.9$). The shame of failure (I_f) is –0.9 (very high, since the task was very easy).

Hence, $T_f = M_{AF} \times (1 - P_s) \times (-P_s)$. Overall, the achievement related behaviour, or the tendency to do a task is equal to :

$$\begin{aligned} T &= T_s + T_f \\ &= M_s \times P_s \times (1 - P_s) + M_{AF} \times (1 - P_s) \times (-P_s) \\ &= (M_s - M_{AF})\ P_s\ (1 - P_s) \end{aligned}$$

Hence, entrepreneurial behaviour is seen more often in people who

1. are high on need for achievement
2. are low on fear of failure
3. take moderate risks and prefer moderately difficult tasks.

n Characteristics of Entrepreneurial Behaviour

Entrepreneurship refers to the creative and innovative response to the environment. Such responses can take place in any field of

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endeavour : business, agriculture, social work, industry or education. Thus doing new things or doing the same thing in a new way is a simple definition of entrepreneurship. (Rao and Pareek, 1978).

Why do some individuals decide to venture into entrepreneurship while others don't ? This individual difference in entrepreneurial behaviour has motivated psychologists to search for some 'entrepreneurial traits'. But as Amar Bhide (1991) puts it, 'there is no ideal profile. Entrepreneurs can be gregarious or taciturn, analytical or intuitive cautious or daring'. However, this doesn't mean that no trend in the characteristics of entrepreneurial behaviour can be observed. Rather, interviews with entrepreneurs show some general trends. For

example, in the National Knowledge Commission (NKC) on entrepreneurship report, some entrepreneurs were interviewed (NKC, 2007). Some reason that they stated were :

- 'Entrepreneurship offers the opportunity to create something of one's own'
- 'Entrepreneurship is about the sheer joy of taking an idea and making it work', that is, it is related to **intrinsic motivation**
- 'Entrepreneurship provides a **constant learning experience** and a continuous process of growth'
- 'Entrepreneurship allows possibilities for constant **self-actualization**', that is, it is about striving for growth and realizing one's inherent potential.
- 'Entrepreneurship allows people to think outside the box and make thoughts work', that is, it fulfils **need for creativity**.

In this section, I will endeavour to discuss some general characteristics that make an individual more vulnerable to entrepreneurial behaviour than others, i.e. characteristics that predispose some to show entrepreneurial behaviour. But before that let me make the distinction between entrepreneurship and starting a venture clear. Suppose I prepare for Civil Services for years, don't succeed and don't get a job, and don't have the caliber to go for an alternate employment. If I start a business out of sheer desperation, it is not entrepreneurial behaviour I am showing . It is because I am starting a business with the sole motive of getting an income. Whereas entrepreneurial behaviour is about doing something different with multiple motives, both intrinsic and extrinsic.

Before discussing various characteristics of entrepreneurs, let us check some research results in entrepreneurial behaviour.

Characteristics of Entrepreneurs : Literature Survey

- Rao (1978) found Entrepreneurs as aggressive, mentally hyper-active, opportunists, courageous, exploiting in nature and possessing a pleasant personality.
- Gaikwad and Tripathi (1970) studied small entrepreneurs of the Tanku region of the West-Godavari district in Andhra Pradesh and found some pre-requisites of successful entrepreneurship : **initiative, drive** and **hard work.**
- Bhattacharjee and Akhouri (1975) empirically tested the entrepreneurial characteristics of small industry entrepreneurs. They found that the most significant characteristics of successful entrepreneurship are **need for achievement, need for power, need for independence, personality modernity, propensity to take risk,** business experience, **leadership** and *symbolic or actual rejection by father.*

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- Meredith and colleagues (1982) identified six important personality traits of good entrepreneurs :
  1. Self-confidence
  2. Risk-taking ability
  3. Flexibility
  4. Need for achievement
  5. Internal Locus of Control
  6. A strong desire to be independent
- Venkatapathy (1986) had compared the characteristics of first generation entrepreneurs and second generation entrepreneurs. Second generation entrepreneurs are those who hail from business families (often Marwari, Bania, Parsi etc.) and decide to start their own venture. Venkatapathy found that first generation entrepreneurs are more enterprising, more social, less conventional, more open to innovative practices and have more positive self-concept than second-generation entrepreneurs.
- Pathak (1978) found that a strong desire for independence was one of the personality dimensions of entrepreneurs.
- Satvir Singh (1991) found that fast progressed entrepreneurs are emotionally stable and have high level of self-esteem.
- Sen and Seth (1992) found that entrepreneurs were imaginative, cheerful, self-assertive, decisive, ambitious, socially conscious, mature, integrated and self-confident.

Characteristics of Female Entrepreneurs

- Shah (1987) had divided women entrepreneurs into three categories to map their characteristics across social classes :
  (i) Women entrepreneurs of middle and high middle-income groups.
  (ii) Women entrepreneurs coming from middle and low middle income groups and having science and technology background.
  (iii) Women entrepreneurs of low income group coming from the lower strata of society.

  Shah found some common features of women entrepreneurs that were found in entrepreneurs of all three categories, like need for achievement, initiative, problem-solving skills and risk-taking nature. The second category reported utilization of experience and education as a motive. The low-income group was motivated by economic needs.
- Dhillon (1993) studied 40 women entrepreneurs in and around Delhi. The findings were that the most dominant motives were '*fulfillment of ambition*' and '*pursuit of own interest*'. The findings further reflect that women entrepreneurs have a high need for achievement, independence orientation and ability for decision-making. On the whole, Dhillon found that the typical women entrepreneur likes the independence associated with entrepreneurship and is a dreamer with high hopes, has a positive orientation towards competition and is confident of her ability to deal with problems.
- K. P. Singh (1993) studied women entrepreneurs in a major city of India and

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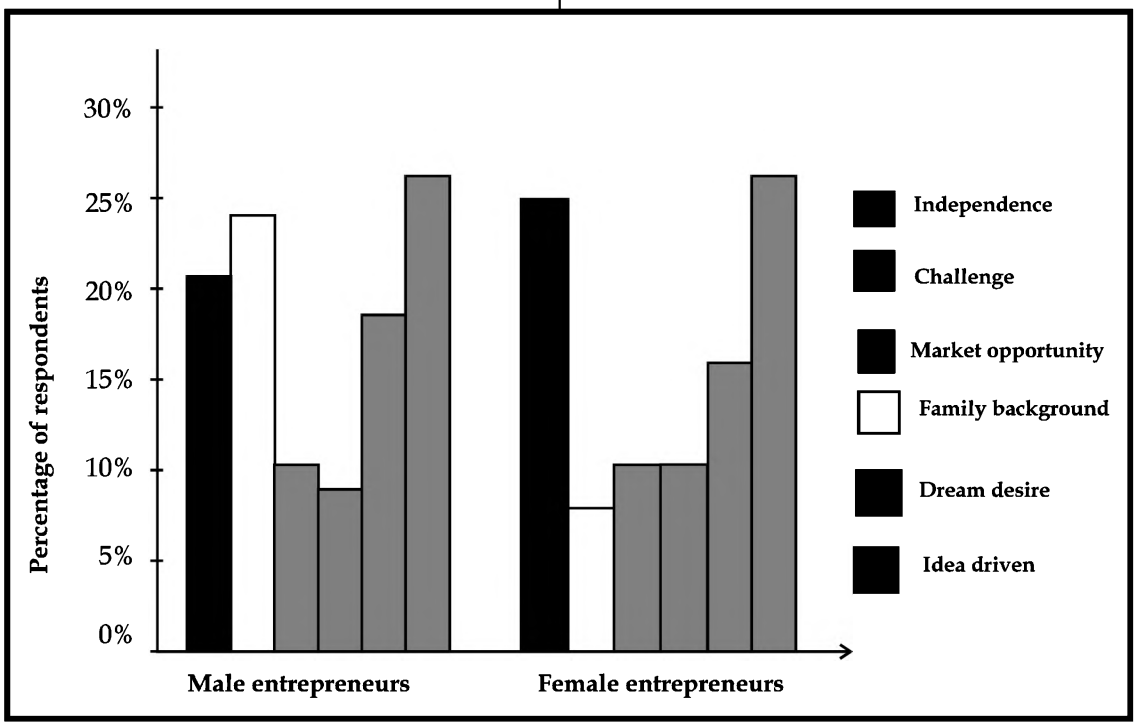
found that the need for independence was the most predominant motive for 46% of the respondents. She observes that women entrepreneurs desired to be their own bosses and wanted to maintain their own individual identity. 'A strong desire to prove oneself was the main motive with 21 percent of the respondents... earning money was the main motive with only 15 percent of the respondents, most of whom were widows and divorcees who had to field for themselves and their families'. The dominant source of entrepreneurial motivation in K. P. Singh's study are :

Motives	Percentage
To become independent	46.5%
To prove oneself	21%
To earn money	15.5%
Job satisfaction	8.5%
Competition	4.5%
To gain status	4%

- The NKC study has revealed that for female entrepreneurs, the independence derived from entrepreneurship and identification of a marketable idea are the two most important motivators. Comparing women entrepreneurs with male entrepreneurs, the study states that more entrepreneurs are more significantly influenced by family background. The comparison between the two types is given under :



Source : NKC, 2007, p. 12

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Entrepreneurs : A Profile

As seen from the rich literature on entrepreneurial characteristics, there are many features that are found among entrepreneurs. Of course, differences exist on the basis of gender, family background (whether belonging to business families or middle-class or lower-class families), age and levels of work experiences. But some persistent traits can be taken and discussed, as under :

1. Need for Achievement

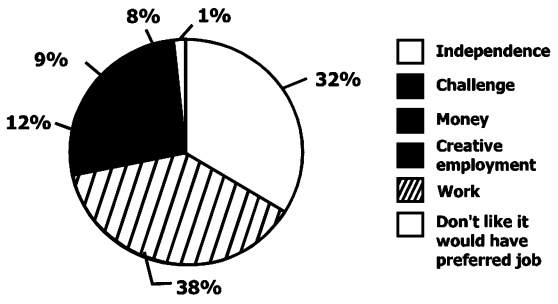
As seen in earlier discussion, high need for achievement is positively correlated with entrepreneurial behaviour. Many studies have confirmed this. For instance, Andrews (1967) studied two companies (Say A and P) in Mexico city. Company-A had been growing at a very rapid rate for the past 3-4 years while Company-P had been growing much slower. He found that the top executives of Company A (who were in entrepreneurial positions) were high on need for achievement while similar positions in Company P were filled by those managers who were low on achievement motivation. In another study, small line entrepreneurs of a rural village in Orissa were studied (Fraser, 1961). A number of mechanics were assessed on nAchievement. After this, a training to improve nAchievement was given. After a year, they were again assessed. It was found that those high on nAchievement showed more entrepreneurial spirit and less involvement in traditional agricultural activities than those with low nAchievement.

Many studies have shown the relation between need for achievement and innovations. Many studies on rural India have confirmed that farmers who are high on nAchievement are change-prone and readily adopt new technology. Many studies discussed earlier also shown high need for achievement as a persistent characteristics of entrepreneurs.

2. Low Profit Motive

Many economists used to believe that entrepreneurship is driven by profit motive. However, psychologists have proved this to be wrong. Several studies conducted in the field and laboratories have shown that entrepreneurs who are high on need for achievement are interested in excellence rather than for monetary rewards. These entrepreneurs are even ready to work in groups and for group goals rather than for themselves or for ego goals.

When National Knowledge Commission (NKC) asked entrepreneurs : 'Where do you see yourself five years from now ?', it was discovered that most entrepreneurs envision the future of their business in terms of the quality of work and nature of business rather than only in terms of turnover and profits (NKC, 2007). In fact, NKC found many motivators behind entrepreneurial behaviour, and the share of these factors in their study are represented as under :



Source : NKC, 2007, P. 17

Please note that money as a factor is the dominant motivator in only 12% of the cases studied.

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3. Decision Choices

Entrepreneurial behaviour is associated with *moderate risk-taking* and *low gambling* behaviour. The moderate risk-taking behaviour is evident from Atkinson's formula; it has also been demonstrated in many studies.

The gambling behaviour of entrepreneurs is of specific interest here. Littig (1959) found that entrepreneurs prefer the bet with shortest odds in gambling. On the other hand, those low on nAch like to take greater risks in gambling, expecting greater rewards. Littig explains this by stating that entrepreneurs prefer to venture for tasks over which they have control. They are high on confidence and will take moderate, calculated risks. But gambling is pure luck : so they prefer the safest bet in gambling.

4. Personality Variables

Some common personality traits have been observed in entrepreneurs. They are high on *internal locus of control*, show competitive aggressiveness and have a marked preference for autonomy in the job. Hundal and S. Singh (1980) have found that entrepreneurial farmers are high on *emotional stability* and *intelligence*, and have *realistic aspirations* in comparison to traditional farmers.

5. Inter-Personal Relations

This pertains to the leadership orientation of entrepreneurs and the people they prefer to keep company. It has been found that entrepreneurs have a tendency to select experts rather than friends as work partners (French, 1956). They have *flexible leadership styles*, less autocratic and more participative. Some scholars have observed that transformational leaders are high on entrepreneurial behaviour. These leaders rise in times of crisis and transform the organization in order to better cope with changing times. These leaders are in fact entrepreneur managers.

Environmental Factors in Entrepreneurship

There are many situational constraints to one's efforts to start a business. At the same time, environmental factors may affect the nature and manifestation of motives, personality, attitudes and beliefs related to entrepreneurship. Some of these are :

1. Family factors :

Family has been accepted as a crucial factor in entrepreneurship. Various factors related to family that affect entrepreneurial behaviour are :

- Birth order
- Family structure
- Father
- Family support

Some studies have found that first born children tend to have higher need for achievement, and hence are more enterprising, because their parents set high standards for them. This hypothesis, however, has been proved wrong in case of India. McClelland (1961) suggests from study of samples of Indian students from Madras that the younger children may have higher nAch in India.

Family structure also plays a major role. For example, it is said that joint family system of India reduces incentive for hard work, promotes idleness and increases need for dependency among children. Also, when a child stays in a mother-child household (which may result due to divorce or separation or because the mother is unmarried), the need for achievement is lower (McClelland, 1961).

Psychoanalysts stress that a father has an important role to play in the psychic

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development of the child. Identification with the parent of the same sex is the first and essential step to resolve the conflicts of the phallic stage. No wonder, father has an overbearing influence on development of entrepreneurial traits. Bhattacharjee and Aghouri (1975) have found that symbolic or actual rejection by father is related to entrepreneurial behaviour. Mehta (1966) found a curvilinear relation between boys' nAch and their fathers' education. When fathers had higher education or lower education, the nAch of boy was higher than that if father has secondary school education.

That family support is important not only to start a business but also for success of same is evident from a study by Deivasenapathy (1996) on 45 entrepreneurs from sick units and 53 entrepreneurs from successful units. It was found that family support influences success. The NKC study (2007) also found that of the successful entrepreneurs studied, as many as 74% were supported by family.

2. Socio-economic Status :

The relation between socio-economic status (SES) and motivation for entrepreneurship is curvilinear. Businessmen in many countries tend to have higher need for achievement if they come from middle class families than if they come from upper or working class background (McClelland, 1961). Basically, there is a class sub-culture corresponding to each class consisting of certain values. This sub-culture affects attitude towards entrepreneurship.

A major factor impeding entrepreneurship is the social group called **caste.** Caste system usually places normative restrictions on the kind of occupation an individual can do. A son of a Brahmin can't expect to do manual labour and that of a Teli can't expect to start schools. Hence, the caste system severely impairs the expectancy and aspirations of people. This impedes entrepreneurial behaviour. Kapp (1963) observes that 'caste frustrates the creative powers and lowers the aspirations of large number of people, thereby causing a serious waste of individual capacities and labour resources. Caste puts premium on traditional occupations by preventing the development of personal initiative; it works against the emergence of a relationship between individual aptitude, performance and earnings'.

Logically, upper castes have greater degree of freedom than lower castes with respect to entrepreneurs. This is also confirmed by Nafzigar (1975) from a study of entrepreneurs from small-scale manufacturing enterprises in Visakhapatnam. He found that a highly disproportionate number of entrepreneurs were from higher castes.

3. Education :

Education is an indispensable tool for skill development and hence is an important factor in entrepreneurship. Not that education is essential to start a small enterprise, but it does help when an entrepreneur goes for a task which needs specific skills or when the entrepreneur seeks to expand operations beyond local level. McClelland (1966) has observed that countries which invested heavily on education on the average developed more rapidly economically after a number of years when the educated population have reached working age. Sinha (1968) has also reported positive relationship between education and aspiration in developed countries.

4. Entrepreneurial Ecosystem

Entrepreneurial ecosystem refers to the whole gamut of social attitudes, cultural norms and values, and state support to entrepreneurship.

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These factors immensely contribute to perception about entrepreneurship. For example, if in a society business is looked at as an occupation of lower status, people will be discouraged to be businessmen. The Vaishya castes in India are placed below Brahmin and Kshatriya castes. This places a lower esteem on business occupations and discourage other castes from taking up such occupations.

Similarly, if in a culture the negative attitude towards failure of a business venture is large, the fear of failure in an individual will be high even before she starts her venture. And indeed, the stigma attached with failure is high in many cultures. Hence, many sociologists and psychologists recommend that entrepreneurship should be celebrated, irrespective of its outcomes.

The culture is not the only factor that makes up the entrepreneurial ecosystem. There are other factors that can facilitate an entrepreneurial culture or hinder it. Some are :

- Industrial climate.
- Mentoring and networking
- Financial support and extension facilities made available by government.

n Government Policies for Promotion of Entrepreneurship

The entrepreneurial ecosystem can become a conducive environment promoting entrepreneurship or a hindrance to the development of it. And a singularly critical component of entrepreneurial ecosystem is the government. Government policies play an important part in motivating or demotivating entrepreneurs. For example, in the 1960s and 1970s, it was very tough for someone to open a company. It was even tougher to sustain it because income tax was as high as 97.5%. That was a time when government was influenced by socialistic ideals and believed that centralized, government controlled Public Sector Units (PSU) can drive economic growth. No wonder, even the most entrepreneurial individual got appalled and couldn't start ventures. For those who still wanted to start their business decided to do so outside India. For example, Aditya Birla raised an empire based on industries in Malaysia and other south-east Asian countries. While Indians contributed a lot to the development of many other countries, the policies of the government of India slowly became more progressive. Post-1992, the policies now are promoting entrepreneurship in a big way.

The role of government in promoting entrepreneurship is evident from a study of inter-state patterns of entrepreneurial performance (Sharma, 1976). In this study, the variations in industrial climate in the states of Punjab and Uttar Pradesh were correlated to variations in entrepreneurial performance, and it was found that better the industrial climate, more the entrepreneurial behaviour. Let us study present policies and programs of government to promote entrepreneurship.

1. Credit and Finance

For the purpose of credit flow to weaker sections of society so that they can get self-employed, the government has constituted program like Swarnjayanti Gram Swarozgar Yojana (SGSY), Swarna Jayanti Shahari Rojgar Yojana (SJSRY), and Prime Minister Rozgar Yojana (PMRY) among other such programmes. SGSY is a scheme aiming at establishing a large number of micro enterprises in the rural areas. Though it provides credit to rural poor, it is

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more holistic in the sense that it covers other aspects such as organising the poor into self-help groups, training, technology, infrastructure and marketing. SJSRY provides bank credit to urban poor and it has two important sub-schemes : Urban Self-Employment Programme (USEP) and Development of Women and Children in Urban Areas (DWCUA).

These days, an important concept doing the rounds is 'financial inclusion'. For financial inclusion, the main instrument that finance ministry seeks to utilize is **microfinance** to self-help groups. Self-help groups have been found to be quite conducive for entrepreneurial development given the fact that they increase group efficacy and self-confidence of entrepreneurs. Further, the fear of failure in self-help groups is low due to a diffusion of risk and responsibility. This promotes greater risk taking behaviour. In contrast, the individual poor has high need for dependency, low self-efficacy and low achievement motivation (for more characteristics of the poor that prevent development of entrepreneurship behaviour, see the chapter on community psychology).

2. Training

Training has been one of the grey areas of government efforts to promote entrepreneurs. But of late, the centre and various state governments are looking into the issue of training and skill development in a big way. For instance, the National Knowledge Commission (NKC), 2007) has recommended that vocational education training (VET) should be a priority sector in education. Many of the school students who don't make it to universities don't find their education of much use in case they aim for self-employment. VET can help develop necessary skills so that one can venture forth in a business area that demands some basic skill sets.

Entrepreneurial Development Programmes (EDP) are also conducted to cultivate the skill in unemployed youths for setting up micro and small enterprises. Another set of programmes, called the Management Development Programmes (MDP) seeks to provide training to existing entrepreneurs on various areas to develop skills in management to improve their decision-making capabilities. This program aims to increase productivity and profitability of entrepreneurial ventures.

There are certain specific programmes that aim to help and training certain target groups for entrepreneurship. For example, Training of Rural Youth for Self Employment (TRYSEM), Development of Women and Children in Rural Areas (DWCRA), Supply of Improved Toolkits to Rural Artisans (SITRA) etc.

A new concept in the world of entrepreneurship is **techno-preneurship.** Techno-preneurs are highly skilled entrepreneurs (mostly graduates) who seek to venture in the fields of electronics, computer software, finance, e-commerce etc. For them, the government supports various activites in colleges and universities. For example, there are today entrepreneurship cells in various IITs and IIMs to train and guide start-up companies throughout the process of entrepreneurship. The Ministry of Human Resource Development (HRD) actively supports these.

Plan vision for training : The Eleventh Plan aims to launch a National Skill Development Mission (NSDM) and proposes to allocate Rs. 31,200 crore for same. During the plan period of five years, the mission is expected to increase the number of trained persons from 2.5 million to 10 million. The government also seeks to involve the private sector through the Public

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Private Partnership (PPP) model in training programmes. The NSDM also has an action plan to set up 600 new RUDSETIs (Rural Development and Self Employment Training Institutes). These RUDSETIs are expected to focus on developing entrepreneurshp in collaboration with the Entrepreneurship Development Institute (EDI). EDI is an autonomous organization set up to promote entrepreneurship through education, research and training.
(Refer www.ediindia. org for details)

3. Extension facilities

Suppose you take some rural farmers and train them on the merits of horticulture and use of latest technology to improve productivity, or you train some individual in achievement motivation, but he/she doesn't have any guidance with respect to the business area he/she seeks to venture into. This acts as a demotivator. Hence, the need for extension service. For example, agricultural extension aims at improving technology dissemination for farmers.

That the government is serious about extension is evident from the fact that in the 2008-09 budget, the finance minister proposed the establishment of many new extension centres. To augment agriculture extension, broadcasts through radio channels are provided. **Kisan Call Centres** are now being operated throughout the country to provide expert advise to farmers.

Similar measures to provide extension services are also being provided to entrepreneurs in the rural non-farm sector and in Medium, Small and Micro Enterprises (MSME) sectors.

4. Business Incubation for Entrepreneurship (BIE)

Business Incubation for Entrepreneurs (BIE) is a critical organizational support mechanism for fledging entrepreneurs at the initial stage (NKC, 2007). A typical business incubation programme provides the following services to a budding entrepreneur :

- Physical infrastructure
- Administrative support
- Management guidance and mentoring
- Technical support
- Facilitating access to finance

All the above are situational constraints that an entrepreneur faces when he begins his business. Any help in tackling these constraints is akin to motivating the entrepreneur. The government at centre and those in various states realize this logic and hence have provided many facilities for business incubation. For instance, in order to develop techno-preneurship, the Ministry of Science and Technology (MOST) initiated the **Science and Technological Entrepreneurship Park (STEP)** Programme. STEP has endeavoured to foster linkages between academic industry and R & D institutions in inculcating an entrepreneurial culture. Another initiatives worth the mention is the Technology Incubation for Development of Entrepreneurs (TIDE). TIDE seeks to set a fund worth Rs. 25 crore, of which, selected start ups will receive a funding of Rs. 25 lakh to Rs. 50 lakh for a period of two years. This initiative will also be promoted through premier institutions like IITs, IIMs and IISc.

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Government Policies for Promotion of Women Entrepreneurs

The root driver of government policies in India are the five year plans. Schemes for women development in various plans till the Sixth plan were conspicuous in their absence. The Employment Policy of Sixth Plan (1980-85) had two major goals – reducing under-employment and lowering the age of retirement. The plan provided a 'New Deal' for self-employment by providing services like training, credit, marketing and general guidance for those who wanted to launch their own entrepreneurial ventures. Special attention in the New Deal was paid to women entrepreneurs by way of financial and technical assistance. (Chakraborty, 2001).

A definite shift of focus was made in the Seventh plan from the welfare concept to development concept in planning for women. The plan's main suggestions were to diversify vocational training facilities for women to suit their varied needs, provide marketing assistance at the state level and to increase women's participation in decision-making.

During the last few years, 'considerable progress has been made in the country to develop new women entrepreneurs through training, and at present many states are involved in WED (Women Entrepreneurship Development) Programming, and SEP/IGP (Self-Employment and Income Generation Programme). Supporting facilities like infrastructure financing and training have been made quite favourable. There are a number of schemes of the government like Prime Minister's Rojgar Yojana (PMRY), a scheme for Urban Micro Entrepreneurs; Development of Women and Children in Rural Areas (DWCRA) and Indira Rojgar Yojana (I.R.Y.) for encouraging women to become successful entrepreneurs' (Chakroborty, 2001, P. 85).

In addition to such specific programmes, the government realizes that to create a conducive environment it needs to provide credit, finance and extension assistance. A number of organizations are involved in creating a congenial environment for women entrepreneurs, like :

- National Small Industries Corporation (NSIC)
- Small Industrial Development Organization (SIDO)
- National Research Development Corporation (NRDC)
- Khadi and Village Industries Commission (KVIC)
- National Institute for Entrepreneurship and Small Business Development (NIESBUD)
- Scheme of Interest Subsidy for Women Entrepreneurs (SISWE)
- Small Industries Development Bank of India (SIDBI)
- National Alliance for Young Entrepreneurs (NAYE)
- State Bank of India (SBI)
- Industrial Financial Corporation of India (IFCI)

Nationalized banks like SBI and various financial institutions play a vital role in encouraging small women entrepreneurs through various credit schemes. Now let us look into some current programmes, meant for women entrepreneurs, by the government of India :

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1. **STEP :** Support to Training and Employment Programme for Women (STEP) was launched by the Central Government in 1987. Its various activities for women in traditional sectors include mobilizing them in viable groups, arranging for marketing linkages, support services and access to credit. It has immensely benefited women entrepreneurs in the fields of Animal Husbandry, dairying, handloom, handicrafts and sericulture.
2. **Swayamsidha :** It is an integrated scheme for economic empowerment of women. It seeks to establish Self Help Groups (SHG), and create confidence and awareness among members of SHGs regarding health, nutrition, education, legal rights etc. The scheme covers 650 blocks in 335 districts in the country. Each block consists of 100 SHGs under this programme. These SHGs are made mostly through the ICDS (Integrated Child Development Scheme) machinery, but certain states like Uttar Pradesh, Bihar, Uttarakhand etc. also take the help of NGOs to implement the programme.

n Motivating and Training People for Entrepreneurship

Given the fact that entrepreneurship drives economic development, strategies to motivate and train people for entrepreneurship have been a prime focus of policy makers and social psychologists alike. To motivate people, we need to promote an entrepreneurial culture and provide all requisite support for starting a business. Environmental factors can be motivators or demotivators. These factors together constitute the **entrepreneurial ecosystem.** Strategies to motivate people for entrepreneurship should look into making the ecosystem more conducive and progressive to entrepreneurs. Training refers to planned interventions to inculcate some learning and qualities that promote entrepreneurial behaviour. These interventions can be to enhance an individual's skills (so as to make her more competent and confident about the work; this promotes self-efficacy and greater risk-taking behaviour) or change her attitudes, values and motives. For instance, a fatalistic attitude coupled with high need for dependence and low need for achievement leads to lower entrepreneurial behaviour. This has to be changed through training.

The Entrepreneurial Ecosystem :

Entrepreneurial ecosystem is the sum-total of environmental factors that promote or hinder entrepreneurship. The ecosystem is the prime external force that can act as a motivator or demotivator for entrepreneurship. For instance, when I was an undergraduate student in IIT Kharagpur, I had an ideas that could have been converted into a viable business opportunity. But a business plan (B-plan) doesn't automatically lead to a venture. I needed finance, mentoring, networking with people in the software sector (my plan was related to the software sector), and above all, family support. While my parents discouraged me at every step, I was unable to get any finance or mentors to help me with my plan. Ultimately, I got demotivated and dejected and dropped my plan.

Luckily, today IIT Kharagpur has its own entrepreneurship development body that promotes students and their ideas. This is one among many factors that can motivate the

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individual to go for entrepreneurship. In fact, the entrepreneurial ecosystem can be represented as under :

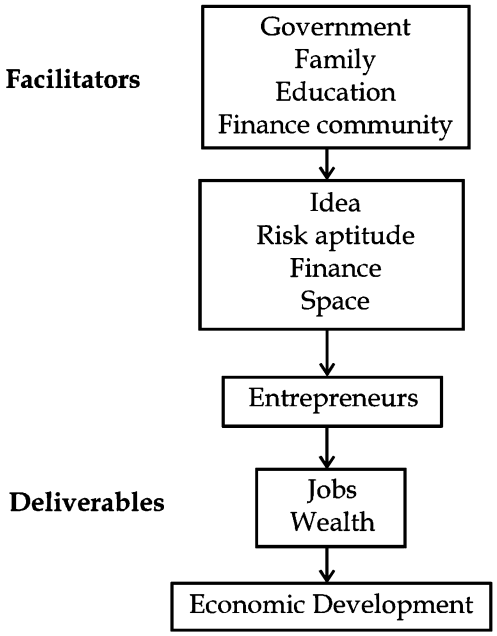

Fig. : The Entrepreneurial Ecosystem. Adapted from NKC (2007)

The facilitators, namely government, family, education, finance community and non-governmental organizations all have important roles to play in motivating people for entrepreneurship. Let us study some measures that can be taken to motivate people towards entrepreneurship :

1. Mentoring and Networking :

A few entrepreneurs decide to start their ventures after many years of job experience. But many entrepreneurs are young people. They are always in the need for mentors to guide them in the ventures. Also, all entrepreneurs need to have a strong network. Networking helps them a lot in that they get to communicate with other businessmen and entrepreneurs and learn from their mistakes.

Many interesting initiatives have been taken to provide mentorship and networking facilities to entrepreneurs. For instance, the Bhartiya Yuva Shakti Trust (BYST, also called 'Business and Youth Starting Together') provides key support in networking and in finding an experienced mentor who can help the enterprising youth in meeting various challenges related to the job. Other such organizations are the National Entrepreneurship Network (NEN) and The Indus Entrepreneurs (TiE).

Advantage of networking and mentorship, from a psychological perspective, for an individual's motive to start a business are :

a) The mentor is usually a successful business-man who has gone through similar situations. He acts as a role model to someone who contemplates to start his own venture. The success of the mentor acts as a vicarious reinforcement for the individual.

b) Networking with other entrepreneurs gives a necessary direction to one's business plan. One gets to discuss the idea with others and refine it.

c) Networking increases self-efficacy. When one comes to know about other success stories, and stories of struggle, he is motivated to stay focussed on his venture and not to back out prematurely from the business.

d) Networking also increases expectancy of results. The subjective expectancy of results is affected by how others have performed in similar tasks. One gets to learn the strategies to lead to success (or failure) from his network with other entrepreneurs.

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2. Encourage Student Entrepreneurs in Campus :

Entrepreneurial abilities find fertile ground to grow in educational institutions, where students have great ideas and aspirations, and don't have work-load or job responsibility. Hence, a very good strategy to promote entrepreneurship is to motivate students towards entrepreneurship in educational institution. Cultural programmes like dramatics, singing and dancing are promoted in school and colleges; so are sports programmes. In a similar way, entrepreneurial behaviour can be promoted. Examples can be cited from the few initiatives taken by certain educational institutions. IIT Kharagpur organizes an annual tech-fest **Kshitij** where B-plan contests are held. Otherwise also, many IITs and IIMs have opened entrepreneurship cells that create awareness about entrepreneurship, accept ideas and refine ideas with the help of experts, allocate mentors to students who contemplate to start their own ventures, and provide seed fund wherever necessary.

An 'idea' remains an idea till the time someone shows the route to channelize the idea. Without the route, the idea dies out. The route is a motivator because it provides specific, measurable goals. A student can never be sure if an idea can become a viable business. If he is not provided with support, he may be mired by self-doubt and ultimately get demotivated. One can't pursue an abstract goal for long. Help of educational institutions to students basically convert abstract goals into specific ones and provide a direction to the student.

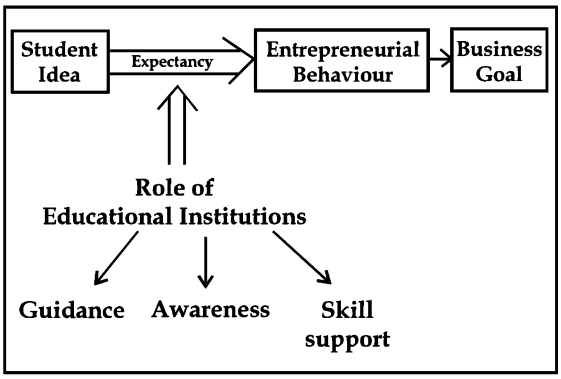

Fig : Motivating students for entrepreneurship

3. Role of Government

It takes around a year to start a company in India. There are many legal and bureaucratic hassles in the process of just starting a company, let alone running it. These hassles are a major demotivator to any person who wants to turn entrepreneur. Some steps that the government can take to motivate people towards entrepreneurship, not to demotivate people from showing entrepreneurial behaviour are :

- Constitute an efficient Single Window System to get clearances.
- Develop proper infrastructure to support entrepreneurs.
- Provide financial assistance.
- Recognize entrepreneurial talent by rewarding and recognizing entrepreneurs.
- Explore the possibility of social security for entrepreneurs to encourage risk-taking ability among people.

4. Education

Any educational system that encourages critical and lateral thinking also promotes innovation. Innovation refers to creative ideas that can be converted into a business venture by entrepreneurial behaviour. Hence, education

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promoting reflexive thinking should be imparted in schools and colleges. Agreed this role played by educational system, but ideas don't themselves lead to entrepreneurship. Behaviour leads to it.

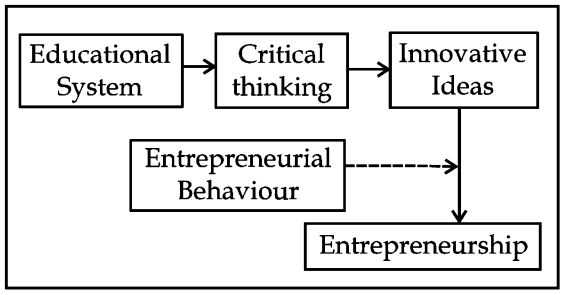

Fig : Philosophy of promoting entrepreneurship through education

And action-oriented behaviour (which entrepreneurial behaviour is) is motivated behaviour. So how can educational system directly motivate students towards entrepreneurship ? Some strategies are :

- Create **awareness** about entrepreneurship
- Increase **expectancy** for entrepreneurial behaviour
- Increase **self-efficacy**

Awareness regarding entrepreneurship can be created by including courses on entrepreneurship in the school curriculum. Today, there are hardly any schools or colleges (other than management colleges) that give courses in entrepreneurship. Including courses on entrepreneurship increases awareness about various opportunities, and hence motivates the individual. Further, case studies of successful entrepreneurs increase expectancy and self-efficacy. IIT Kharagpur's recent proposal to start a school of entrepreneurship is a welcome step and needs to be followed up by other institutes in under-graduate and post-graduate levels.

5. De-Stigmatizing failure

Failure of an entrepreneurial venture is associated with considerable social stigma. In contrast, entrepreneurs are appreciated in western societies for their past ventures, successful or failed. The social stigma attached to failure increases the fear of failure in people who want to start their business. Higher fear of failure means lower motivation to show entrepreneurial behaviour. Risk-taking ability becomes low. Hence, the government, the Chambers of Commerce (FICCI, ASSOCHAM, CII etc.), educational institutions and entrepreneurial networks should try to destigmatize failure. One's experience gained from failed ventures should be respected and appreciated. This will go a long way in changing the role of culture from being a demotivator to a motivator. The fact that an entrepreneur is gutsy and a visionary irrespective of whether he succeeds or fails can be made a social value by the institutions mentioned above.

n Training People for Entrepreneurship

Training interventions are basically of two types : training to increase skills necessary to perform in a new business venture, and training to inculcate right attitudes and motivations conducive for entrepreneurship. Here, we shall discuss the following important interventions :

1. Vocational Education training (VET) and Management skill training (MST)
2. Training to improve achievement motivation
3. Training to improve extension motives (EM) and reduce dependence motivation (DM).

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VET & MET

The irony of our education system is that we are taught to 'mug' passive study materials, whose only utility is as a pre-requisite for university education. But not every student goes to the university. In fact, most don't ! For them, vocational educational training (VET) has been proposed to be quite useful. In VET, necessary skills are taught, the student finds these skills quite useful when he joins a job, and especially useful if he opts for self-employment. Many specialized training institutes have been opened in the country to train entrepreneurs in the Medium, Small and Micro Enterprises (MSME) sector. Ideally, the training should be provided in VET.

Management Skill Training (MST) is necessary to train an entrepreneur. While VET is used to train an individual to become entrepreneur, MST is used to train an entrepreneur to improve the performance of her business organization.

Training to improve Achievement Motivation

The achievement motivated person is a hard-working person who seeks personal responsibility, who sets realistic but challenging personal goals and who seeks feedback about the effects of his efforts. As such he tends to do particularly well in those situation which allow for personal control and innovation, particularly entrepreneurial business situation. Historical studies have shown that the level of achievement motivation in a nation's cultural values may be related to the rise and fall of the nation's economy...hence the need to inculcate achievement motivation through training. On an individual level, businessmen in various countries who have received achievement motivation training have shown significant improvements in their business performance as compared to businessmen who were not trained (Schwitzgebel and Kolb, 1974, P. 159).

Achievement motivation causes entrepreneurial behaviour. Entrepreneurship causes economic development. Hence, devising of training programmes to train in achievement motivation becomes important. Here, we shall discuss the training philosophy developed by David McClelland, a pioneer in the study of nAchievement.

The importance of McClelland's contribution lies not only in his revelation that nAchievement and economic development are related, but also in the fact that he believed achievement motivation can be inculcated by training. He designed a training course to improve achievement motivation and many empirical studies have demonstrated the efficacy of this course.

In designing the training course, McClelland didn't rely on any single theory of behaviour change, rather he borrowed from training techniques of a wide variety of psychological theories : learning theory, theories of attitude change, motivation theory, psychotherapy, and mass media research. Based on these theoretical strands, he forwarded twelve propositions to describe how the course should be designed and run (McClelland, 1965). These propositions can be discussed under the following four headings : *Goal-setting, motive syndrome, cognitive supports* and *group supports* (Schwitzgebel and Kolb, 1974).

1. Goal-Setting

The achievement motivation training programme (AMT) focuses on inducing confidence, commitment and the measurement

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of achievement in the attainment of goals. To induce confidence and commitment, a change in the beliefs and attitude of the individual is needed. The logic here is that if you believe that motivated behaviour can lead to entrepreneurial success, your motivation will be high. Belief in the possibility and desirability of change is a pre-requisite for high achievement motivation. Hence, the AMT tries to create this belief in participants by presenting research findings on the relationship between need for achievement and entrepreneurial success.

The more an individual commits herself to achieving specific goals, more is the motive to achieve the goals. Hence, the participants are made to make a public commitment to seek specific achievement goals. Both confidence and commitment depend on feedback, or the knowledge of results. Feedback helps keep a record of progress towards the ultimate goal. In the AMT, participants are trained in methods of measuring how well they are performing at a given time.

2. Motive Syndrome

A motive is a schema of goal-directed thoughts. Motive syndrome refers to the integration of such thoughts with actions and real life context. There are three propositions under motive syndrome. First, an individual acquires the motives which she can clearly conceptualize. Hence in the AMT, participants are given the Thematic Apperception Test (TAT) and are taught to score their own stories. This way, they evaluate for themselves what nAchievement is and how much of it they have upon entering the course. This exercise helps the participants to streamline their thought processes and helps them in clearly conceptualizing their nAchievement in terms of their thought processes.

Secondly, the motives need to be linked to actions. Thirdly, the more the motives are applied to events in real life, the more likely the motive will be increased. Keeping these two propositions in mind, the AMT makes participants learn action strategies of people with high nAchievement through illustrative games (often business games), analysis and discussion of case studies and discussion on how these action strategies can be applied to everyday life situations.

3. Cognitive Supports

Cognitive theorists believe that thoughts and actions can be affected through rational dialogue. Hence, first cognitive support that needs to be provided is to explore rationality, that is, how the motive is consistent with demands of reality. Secondly, how a particular action will improve a person's self-image and third, how it is consistent with the individual's cultural values. The motive will be increased if it is consistent with :

(a) Demands of reality

(b) A stronger self-image

(c) Cultural values

In the AMT, these objectives are met through individual counselling, and group discussions of nAchievement in relation to folklore, religious books and cultural values. For example, suppose that you have to train people from rural Indian background towards achievement. You explain to them that nAchievement is consistent with religious beliefs. A challenge here is that the concept of Karma asks you to work without expecting any reward. So you reinterpret the concept stating that Krishna wanted us to do our Dharma, and our dharma is to work hard and achieve success – material or spiritual doesn't matter. You tell them that keeping

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entrepreneurial goals is consistent to our cultural values. In our cultural values, entrepreneurship is associated with Baniya and Marwari families who come lower down in the caste hierarchy. So, you stress that over history, many great men and gods have done manual work. Lord Krishna was a cowherd after all. So why can't you start a small business of your own ? It won't degrade your status. Also, the participants' cognitions can be restructured by rational dialogue : the Marwari and Baniya communities are the most prosperous today because of their orientation towards hard work, and because they don't consider any job inferior.

The good news is that there are many religious texts in Hinduism, and most of these texts make contradictory statements. Secondly, the meaning of these texts are subject to our interpretation. Hence, we can easily mould religious beliefs to make them consistent to achievement orientation. If the Bhagavat Gita talks about Dharma and Karma (do your duty without expecting any reward), there are a myriad other religious texts that advocate that striving for achievement and expecting results is your duty.

4. Emotional supports

McClelland recognizes the role of affective factors in increasing motivation towards achievement. Hence, he states that the AMT trainer should assume a warm, non-directive and accepting role. The role of trainers in AMT is to support open exploration by course members rather than direct the whole programme. This idea of McClelland is perhaps influenced by Roger's client centred therapy.

Secondly, participants are made to work in groups. Groups activities provide emotional supports that increase the risk-taking tendency.

Table :
12 Propositions of McClelland's Training Course

1. More the reasons the person has in advance about the possibility and desirability of change, more the likelihood of change.

   Application : Increase the belief in possibility and desirability of change by presenting research findings on the relationship between achievement motivation and entrepreneurial success.

2. If you rationally explore how a motive is consistent with demands of reality, that motive increases.

   Application : Individual counselling and dialogue in which the participant rationally explores consistencies with the help of counsellor/trainer.

3. The more a person clearly conceptualizes the motive to be acquired, the more likely it is that he/she will employ that motive.

   Application : Participants are given TAT and taught to score their own stories.

4. The more an individual can link the motive to related actions, more is the likelihood that the motive will be acquired.

5. The more an individual can transfer and apply the newly conceptualized motive to events of daily life, more is the motivation (i.e., the motive increases).

   Application (of 4 and 5) : The emphasis here is on linking thought processes to actions. Hence, participants are made to play business games, analyze case studies and discuss how various ideas can be applied in everyday life.

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6. If a motive improves a person's self-image, the motive strength increases.

   Application : Using methods of cognitive restructuring, the trainer explains how entrepreneurial success brings prestige and happiness.

7. If the motive is consistent with the dominant cultural values, the motive is more likely to be acquired.

   Application : Group discussions on how nAchievement is consistent with folklore, religious books and cultural values.

8. If an individual commits herself to achieving specific goals related to the motive, there is an increased likelihood of the motive affecting her thoughts and actions in future.

   Application : Participants have to make a public commitment to seek specific achievement goals after a period of training.

9. Motive change is more likely to occur if the person gets regular feedback on the progress made towards the goal.

   Application : Participants are trained in methods of measuring how well they are doing at any time.

10. The course trainers should assume a warm, non-directive and accepting role. The trainer should lead discussions and present information but should let participants explore concepts for themselves.

11. Affective factors are important in increasing motivation. Emotional confrontation helps an individual to clear her thought processes.

    Application : Participants are given the course in retreat settings. By this, emotional and personal confrontation is encouraged and helps the individual in introspection.

12. Emotional group supports enhance motivations.

    Application : Emotional group supports are fostered by encouraging the participants to participate in group activities. Role of self-help groups in entrepreneurial activities is emphasized.

Assessment

Training courses based on McClelland's training design have been run in various developing countries like Japan, Italy, Mexico, Spain and India. The Indian training course was studied and evaluated by McClelland and Winter (1989). 76 businessmen running small businesses in the towns of Kakinada (near Hyderabad) and Vellore were chosen. The group from Kakinada was given a ten-day achievement motivation training while the group from Vellore became the control group. In a follow-up two years later, it was found that the trained businessmen showed substantial and significant increase in entrepreneurial activity, while the control groups members remained near their initial levels. In other studies, scholars have proved the efficacy of this training. A leading scholar in this area is Prayag Mehta, who has designed interventions for training businessmen and school students towards achievement (1968, 1969, 1972, 1978).

Training to increase EM and decrease DM

Pareek (1970) believes that just achievement motivation is not sufficient to motivate people towards self-employment. Especially in the case of rural folks of India, it has been found that people have high need for dependence, a

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fatalistic attitude, powerlessness and unrealistic expectations. These traits are contradictory to entrepreneurial behaviour and economic development. Hence, Pareek proposes that people should be trained in extension motivation (EM) and should be provided training to reduce their high need for dependency (DM). For this, his proposed training programmes are discussed in detail in the chapter on community psychology.

n Consumer Rights and Consumer Courts

The other day, I was eating a burger at a popular eating joint when I found a dead lizard in the burger. The burger was priced at Rs. 50, and the manager of the joint pleaded to replace me the burger or refund the Rs. 50. But is it about the price of the burger ? What amount should be refunded ? What is the extent of loss to me owing to finding the lizard in the burger ? First there is the issue of health and sanitation. Then, there is the issue of psychological impact of the incident on me. I may get an *aversive taste conditioning* towards burgers in general. The traumatic experience of having found a lizard in the burger itself is quite traumatic an experience ! So now what should be done ? I won't do a thing if I don't have the awareness about consumer rights. But if I do, I shall approach a consumer court. But who shall decide the extent of damage that the burger has done to me ? The judge, of course. But the judge is not an expert. Hence, he will take the advice of a consumer psychologist.

When a consumer buys a product, there are certain expectancies attached to the product relating to quality and quantity. However, the sellers may use fraudulent methods (in the desire of higher profits) to cheat the consumer. **Consumer rights** are basic rights guaranteed to the consumer by the doctrine of fairness. To enforce consumer rights, consumer groups resort to legislative control; to claim compensation against violation of consumer rights, they often go to consumer courts. Psychologists best understand consumer behaviour from an individual perspective. The involvement of psychologists here is at multiple levels :

1. Consumer Awareness
2. Consumer Protection
3. Compensation and consumer court litigations
4. Fraudulent marketing strategies

1. Consumer Awareness

Psychologists have played an important role in education and awareness generation among consumers regarding their rights. The layman consumer is often not aware of the quality of product that she is purchasing. Nor does she minutely scrutinize the product she is purchasing. Even if she finds an anomaly she is often not aware of her rights in relation to producers; hence can't claim compensation. For instance, consumers have a right to information regarding marked price, ingredients used in the product, unit price etc. If these informations are printed very illegibly on the packet, and the consumer can't read it, it violates the consumer's right to information. Some psychologists have investigated a shoppers' ability to identify ingredients printed on food packages – at a purely perceptual level – and have reported

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how size and clarity of print affects right to information of consumers. There is an increasing trend among consumer psychologists to research into abuse of consumer trust by sellers and producers.

2. Consumer Protection

The 'Consumer Protection Movement' refers to collective action by consumer groups to pressurize government for better regulations of products. Consumer psychologists have helped the movement by discovering how various product and marketing appeals used to sell products as perceived by consumers. Psychologists try to determine

(Consumer Perception of Product – What the product actually delivers) = **Gap**

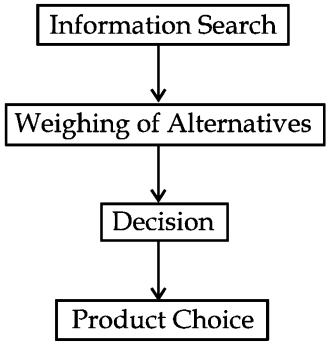
The **gap** between consumer perception and product quality is used as evidence for lobbying for legislations to restrict the fraud caused by the producer. Many consumer psychologists are active in studying the **ergonomics** of products. If a car is marketed as a safe and comfortable one, whereas the producer hasn't taken care of human factors, it may lead to negative impact on the consumer. It may lead to accidents and, in cases, death. The consumer has a right to demand compensation from producer for faulty human factor engineering in the car.

3. Consumer Court Litigation

What if consumer rights are violated by a seller ? The consumer goes to the court for compensation. Since the extent of damage to the consumer is qualitative, what should the compensation be ? The judge takes the help of the consumer psychologist to determine this. Advocates often take help from psychologists' study to argue their points in the court and bargain for appropriate compensations.

4. Fraudulent Marketing Strategies

To maximize profits, some producers use fraudulent strategies. But to understand how these strategies are made, we need to understand consumer decision making process. Consumer decision-making goes through the following steps:



A basic consumer right is informal decision making. If first two steps are skipped due to fraudulent marketing strategies, it is unethical. For example, suppose the price written on a label or nutritional content mentioned on the cover of a product is too small to be perceived, 'information search' fails. Such means are used by the producer to cheat consumers. Unethical use of mass media is also prevalent for selling products. For example, subliminal perception strategies were used in 1950s in USA to advertise products. Such strategies affect consumer decision making without the consumer's awareness. Basically in subliminal perception, the consumer can't consciously perceive the message but the message makes unconscious suggestions that affect consumer

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decision. In the 1950s, many marketing strategists used subliminal advertisements in theatres to boost sales of cold drinks and pop corns. Movies in theatres were subliminally superimposed with advertisements like 'Hungry! Eat Popcorn'. These movies were altered with movies without subliminal messages. It was found that sales of popcorns rose by around 50% for movies with subliminal messages.

Such news is frightening ! It means, certain fraudulent marketing and persuasion strategies exist that can influence our decision as consumers ! Psychologists conduct research to find out more about these fraudulent strategies and how they affect the consumer. Using this rich research base, consumers can assert their rights.

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Psychology Applied to Technology Related Issues

15. Psychology of Information Technology and Mass Media
16. Media Influence on Pro and antisocial behaviour

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15

Psychology of IT & Mass Media

- Developments in Media Psychology
- Psychological consequences of boom in IT and Mass Media
- Role of psychologists in boom in IT and Mass Media
- Training psychology professionals to work in the field of IT and Mass Media

n Developments in Media Psychology

Internet and its related technologies 'will change almost every aspect of our lifes -private, social, cultural, economic and political... because [they] deal with the very essence of human society: communication between people. Earlier technologies, from printing to the telegraph... have wrought big changes over time. But the social changes over the coming decades are likely to be much more extensive, and to happen much faster, than any in the past, because the technologies driving them are continuing to develop at break-neck pace. More importantly, they look as if together they will be as pervasive and ubiquitous as electricity'

-Manasian (2003, p.4)

The present scenario in Information Technology and Mass Media.

The rapid development of media technology is perhaps the biggest technological revolution of 20th century. Communication technology, mass media and finally information technology have revolutionised the way people communicate. With increased communication piercing geographical barriers, the world is soon becoming a 'Global Village'. Traditionally society and culture used to change from village to village. Today, owing to mass media common cultural characteristics are found on national and even global level.

The boom in mass media and information technology (IT) has opened up numerous avenues for living a different life. At this point, some cutting edge new technologies, having psychological signifiance, may be discussed. The third generation (3G) technology aims at using digital convergence of T.V. broadcast, internet, and multimedia in a single mobile phone. The relation (and possible addiction) of a person with her mobile phone has become of interest to psychologists. A handy mobile phone is one's window to a huge network of people, places and information.

In the field of cyberpsychology, some technologies that are of interest are Web 2.0

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technology and virtual reality. Web 2.0 technology is a modern tool to make websites, browsers, blogs and wikis more interactive. The attempt here is to make the web-human interaction as good as human-human interaction. **Virtual reality** is an attempt to make the web world as 'real' as the real world. It makes use of complex 3-dimensional graphics and artificial intelligence to construct an environment that simulates the real world. Many games have been devised which try to simulate real life action scenes. You can sit here in New Delhi and can play a game of Counter Strike with people from Pakistan, America, Canada, Vietnam or China. You also have the preference of becoming the terrorist and counter-terrorist in the game. You can be an expert in Kung Fu or in jungle warfare by just clicking on options in these games. Hence, this environment is more flexible than the real environment.

Beyond war games, **virtual reality** is now being used to build new worlds altogether. In the game 'second life', you can enroll with an username then get citizenship of a country on Second life, study, work, buy property, marry, have sex with your wife, cheat on your wife, and get a divorce. You get a chance to live an entirely different life, and may be get satisfaction, happiness and well-being in this world, if not the real world.

Developments in mass media also pose a challenge to psychological studies. TV Media is a one-way communication via which the programme communicator influences the viewer. All new fashion trends start from TV and movies. New and old ideologies are propagated through TV. Violence, love, hatred, and other emotions are 'learnt' by the viewer through media. Media fosters stereotypes. News media disseminate all types news – both true and false news. Hence, psychological study of mass media is necessary. Next let us investigate some psychological consequences of recent developments in IT and Mass Media.

n Psychological Consequences

Talking of technological changes, sociologist Ogburn had observed that changes in non-material cultures often follow changes in material cultures (technology, for example), but with a lag. This lag is called the **culture lag.** Changes in technology leads to a lag not only in non-material culture (like norms, values etc.), but also by human personality. The revolution in information technology has had definite impacts on human psyche. In fact, such has been the speed of impact that it is feared in future the changes will be too much to adapt to and may lead to a **future shock**(Toffler, 1970).

To the credit of IT, it can't be denied that it has many beneficial effects on the individual, the organization, and the society at large. No agent of change is devoid of short-comings. IT being no exception, it has its ill-impact on individual humans, and groups. Let us discuss the impacts of IT from a psychological point of view :

1. IT and Human Needs

IT provides immense opportunities for individuals to fulfil their needs across the need structure – both intrinsic drives and social needs. These needs can, in fact, be represented as a pyramidal structure :

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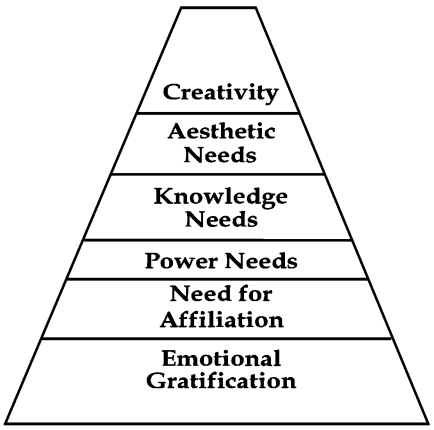

Emotional gratification is obtained from IT because it is a channel for cathartic release. According to the psychoanalytic school, cathartic release happens when an individual has an 'outlet' to channelize her psychic energy. When you express your opinions, vent your anger and frustration or express your hatred towards somebody or something on the net, you express your emotions. You may open a blog under anonymous name and express all your feelings. Therapists often believe that expressing oneself is one of the best ways to control anxiety ('Talk'. they say !). In a way, blogs and discussion forums are therapeutic in nature.

One gets to make many new contacts and friends through social networking sites like Orkut.com and facebook.com. The **need for affiliation** is also fulfilled through these sites. These days, many love affairs start on Orkut.com. Some sites give the opportunity to chat online, which is also an avenue to meet one's need for affiliation. Sex chat is an avenue for fulfilment of sexual desires, but the exact effect of sex chat on an individual is debatable.

Mind you, social networking sites aren't that good. Many people are maligned on these sites, many hate messages are freely circulated; imposters exist on these networking sites posing as real women, and many rumours are spread here. Guess what the psychological trauma would be on a lady who is maligned or is defamed by an imposter on these sites! Sometimes, social network sites also lead to frustration owing to non-fulfilment of needs. After hearing some success stories of people finding partners on Orkut, even I tried my luck. But to no avail! And it really frustrated me.

We must appreciate the power of anonymity on the world wide web. Your religion, your caste, creed, race etc. hold no significance on web space. You are an equal citizen, and your status depends on your abilities and intellectual vigour. Anonymity mitigates your inferiority complexes and fulfils your **power needs**; thus boosting your self-esteem.

The world wide web (WWW) is a virtual world bigger than the real world. It can virtually fulfill all our **knowledge needs**. Other intrinsic needs that the WWW fulfils are **aesthetic needs** and **cognitive needs**. WWW gives an opportunity for creative expression (through blogs and literary web sites); for showcasing your art; and for participating in contests cutting across geographical boundaries.

2. Second Life

Second life is a three dimensional (3D) internet-based virtual world that allows users to create alter egos and interact with each other. Second life is not a fantasy tour or voyeurism, it is a *parallel life* with a *complete ecosystem*. Here, people enjoy more control and more freedom, have less moral hang-ups (for example, no moral bindings on extra-marital relations) and no physical constraints.

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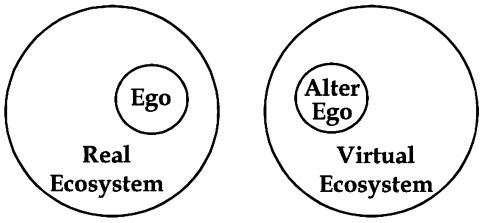

Fig. : Comparison of real world and life in 'Second life'

In a virtual world, you can pick a name, a country, a job, buy and sell property, marry, have virtual sex, divorce and remarry. The person you grow intimate to or have sex with is also a real person, but you don't know him/her; you just know his/her identity on 'second life'. What are the ramifications of this? A person gets a new life, and hence a new self-concept. She now has two 'self', both completely different. Undoubtedly, she finds her new self more desirable. The 'self' in the virtual world has no moral liability, less inhibitions and is not restricted by superego. The virtual ego doesn't face many anxieties the way the real ego does. This may prompt the individual to 'live' on in the virtual world. Many people who we call addicted to computer games and the internet stick there because of the new identity they get.

This is not good. Let me point out that Schizophrenia and other disorders are due to split mind; due to a multiplicity of self-concepts. When faced with a problem in real life, the individual must face it or resolve the problem. Instead, if she withdraws to the virtual world, she doesn't resolve her real problems. And we know that problem focused coping is better than social withdrawal coping style.

3. IT and Organisations

IT has had structural impact on organisational communication and work life. Long before internet came, Karl Marx had observed that automation and machines are a source of alienation of the worker from his work. Similar has been the effect of IT. In organisations, most of the communication is done through informal groups and informal means of communication. Kraut and co-workers (1990), for instance, found from a study of an R&D organisation that 85% of the interactions are informal and unplanned. The biggest advantage of informal communication is that it fosters an informal social group in the work place. However, IT tools like Management Information System (MIS) make it easier to communicate via local intranet network. Face to face communication in organisations decrease. When face to face communication decreases, the informal group breaks. When there is no social group in the work place, the individual feels alienated. Wonder what your situation will be if you work in an office for 8-10 hours, and you don't know anyone in that office! Many of my friends in software company feel frustrated in working in software companies because of this kind of alienation. The *impersonal nature* of work has especially affected clerical jobs, the kind of jobs many software engineers do at the beginning of their career.

Greater use of IT has the potential to even change the organisational structure. Due to facilitation of communication, senior managers can now communicate to junior officers directly. As a result, the organisational power and utility of middle managers decreases.

Teleconferencing

Two revolutionary effects of IT on organisations have been **tele-conferencing and tele-commuting.** Tele-conferencing or video-

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conferencing has made the world a smaller place to live in. Two executives sitting in their respective offices in, say, Bangalore and Boston can communicate to each other. These days, video-conferencing is a popular tool being used in interviews, in meetings and even in e-governance. But the concern of psychologists is the psychological difference between face-to-face communication (which is informal communication) and video-conferencing. An informal communication eliminates hierarchy, promotes feedback, and interaction. Is video-conferencing a good substitute for face-to-face (f2f) communication? This question was empirically investigated by Kraut and co-workers (1990). They gave participants the option of f2f and video-conferencing communication. The result was that compared to f2f conversations, video-conferencing conversations were substantially fewer. Kraut et al observed that communicators maintained a *psychological distance* with each other in video-conferencing communications, even when the videos had life-sized images.

Why is this so ? Some probable reasons why video-conferencing is not a good substitute for informal communication are :

1. In f2f interaction, the ***context*** of the conversation includes people, objects, and the setting of the place. A tele-conferencing situation, on the other hand, is virtual. The social context and physical context of a conversation are important inputs for informal communication. These get missed out when two individuals communicate through video-conferencing.
2. A communication consists of both verbal and non-verbal ***cues***. Though certain non-verbal cues are transmitted through interactive technology, many of the cues don't get transferred. For example, eye gaze, gesture and clothing are some social information that video images do not display as vividly as f2f communication does (Kool and Agrawal, 2006).
3. ***Feedback*** is an important element of conversational interactions. In a f2f conversation situation, eye gaze and facial expressions of the audience (or other members of the communication) provide valuable feedback to the communicator. V.K. Kool and Rita Agrawal (2006) observe that when people in the audience of a talk show make expressions such as head nods or looks of puzzlement, it enriches the communication process. They are skeptical about video-conferencing being able to capture these information using existing technology.

Telecommuting

Telecommuting is a concept that has the potential to revolutionize work life on individual, organizational, and societal level. It refers to working from locations outside the office, using information technology. The concept is revolutionary, in the sense that it is not mandatory for a telecommuting employee to come to the office building physically; she can now work from her home, or any place she is comfortable to work from. Some advantages of telecommuting, according to Harpaz (2002) are :

1. The individual works from home and so has increased flexibility(note that this has potential to reduce the role-conflict in working mothers who also have to take care of troublesome kids).
2. The human resource capacity of the organization increases, and it saves in direct expenditure.

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3. Since the employee doesn't commute to office in her personal vehicle, there is a reduction in environmental pollution. Telecommuting is also a solution for people with special needs. This way it is beneficial to society at large.

Concerns about telecommuting remain. We have already discussed the importance of informal communication and informal work groups. Harpaz believes that in telecommuting there is a possible sense of isolation for the individual from her work culture. In spite of this drawback, the prospect of telecommuting are encouraging. For instance, IBM had sponsored a study to compare how three work venues (1. traditional office, 2. virtual office, 3. home office) influence various dimensions of work life and personal life of employees. The results showed that the home office has positive impact on both work life and personal life of employees, in comparison to the other two work venues (Hill, Ferris and Martinson, 2003).

4. Disorder of Addiction

A major apprehension voiced by psychologists about increasing influence of computers in human life is that it hampers in the socialization process. Some kids prefer web friends and e-chatting over real friends and real dating. Some people spend an unusually large part of their daily routine on the internet. This may be because they enjoy games, or because they are involved in sex chats, or in networking in social network sites like orkut.com. But when the duration spend on the internet becomes 'abnormal', some psychologists claim that these people may be suffering from Internet Addiction Disorder (IAD).

As of now, IAD is a vague concept, and hasn't yet been properly conceptualized. When do you say that a person suffers from IAD ? If she spends ten hours a day on the internet ? Or if she spends 15 hours a day on the internet ? Problem is, people seemed to be addicted to telephones and computers before the advent of internet. Of course, some extreme cases exist, that can be called pathological addiction. If you lose your job, or flunk out of college, or are divorced by your spouse because you cannot resist devoting all your time to world wide web, you are pathologically addicted. But if you don't belong to such extreme cases, it is tough to say whether you are showing abnormal behaviour or not.

The latest edition of Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) doesn't have any specific category for internet addiction disorder. However, the research interest on IAD as a mental disorder is on the increase. For instance, Prof. Kimberly Young, a leading researcher in the field of cyber psychology, has started the Centre for On-Line Addiction (COLA) to study IAD. After watching internet users for a long time, she has developed a criteria for assessing one's dependence on the internet. According to Prof. Young (1996), you are dependent on internet if you meet four of the following criteria over the last one year :

- Felt preoccupied with the internet; felt a need to use the internet with increasing amounts of time in order to achieve satisfaction; Had an inability to control your internet use.
- Felt restless or irritable when attempting to cut or stop internet use.
- Used the internet as a way of escaping from problems or of relieving poor mood.

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- Lied to family members or friends to conceal the extent of involvement with the internet.
- Jeopardized or risked the loss of a significant relation, job, educational or career opportunity because of the internet.
- Kept returning even after spending an excessive amount of money for online fees.
- Went through withdrawal when offline.
- Stayed online longer than originally intended (p. 277).

Besides IAD, there are other disorders associated with cyberspace. For example, **cyberneurosis** is depression due to breaking of online relations. Many workers in the IT industry, who have to work a great deal on the computer and internet, have reported depression and changes in lifestyle. The boom in IT in India is mostly due to BPO industries, where young men and women have to work in odd times. This severely disturb their lifestyle.

5. Interpersonal Relationships

Interpersonal relations are based on interaction between people. The nature of interaction depends on the mode of communication. Since inteerneet and mass media technology have profoundly changed the way we communicate, they have had significant impact on interpersonal relations. As per the "filter model" of Sproull & Kiesler (1985), computer-mediated communication (CMC) is an improvised communication experience, wherein many social cues available in face-to-face communication are filtered out. Hence, if an individual relies excessively on CMC for social communication, she experiences a greater sense of anonymity. This experience leaves a deindividuating effect on the individual, making his behaviour more self-centred and less socially regulated than usual.

The effects of internet use on existing relationships is a topic of intense scholarly interest. The most popular study on this issue was the HomeNet project by Kraut and her colleagues (1998). In this project, the researchers studied some families in Pittsburgh who didn't have computers at home. The researchers gave computers and internet access to these families and did a follow-up study after 2 years. They found that depression and loneliness increased as a function of amount of internet use. Some other scholars also pointed out that owing to long hours spent on the internet, users had less time for interaction with friends and family.

However, both the arguments above have shortcomings. Kraut and her colleagues did a follow-up study on the same sample after two more years (Kraut et al., 2002) and found that the negative effects they had attributed to internet use had disappeared. It has also ben found that heavy internet use does affect the time spent on other activities but the real decrease is in watching television and reading newspapers, not in social interaction with friends and family

Relationship formation on the internet is another major issue of interest. These days, finding friends and dates on the internet is in vogue. Indeed, one study found that many internet users form close relationship over the net(McKenna et al., 2002). The study found that more than 50% of participants had moved from internet based relationships to real-life ones. About 22% participants stated that they were either married, engaged, or living with partners they originally met over the internet. Moreover, these relationships are as stable as traditional relationships.

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Why has internet become so popular as a means for forming relations? Bargh & McKenna (2004) explain that (a) people are better able to express their true selves (those self-aspects they feel are important but they are not able to express in public) to their partner over the internet than in f2f, and (b) when internet partners like each other, they tend to project qualities of their ideal friends onto each other. Kang (2000) rightly observes that cyberspace 'makes talking with strangers easier. The fundamental point of many cyber-realms, such as chat rooms, is to make new acquaintances. By contrast, in most urban settings, few environments encourage us to walk up to strangers and start chatting. In many cities, doing so would amount to physical threat' (p.1161). Next time you see a beautiful girl on the road and feel dejected that it is absurd to walk down and start a conversation, at least try to get her email id or her name so that you can search her up on Orkut.com. Who knows, you may get e-lucky!

6. Digital Divide

Digital divide is the line separating those who have access to internet from those who don't. In the social world, we have many lines separating "haves" and "have-nots". There are literate-illiterates, rich-poor, rural-urban and developed-backward differentiations in society. All of these differences are associated with social exclusion. The digital divide is also associated with exclusion.

Suppose Hari is an expert in psychology, and better at it than Shyam. In this hypothetical case, if Shyam is computer literate and knows how to use the internet, he is better off than Hari. He can access the internet for better ideas for his research projects, he can search for research papers, and use the vast resources available on the net. Hari faces a disability in this case, even though being internet savvy has nothing to do with being good in psychology. He faces exclusion from a huge resource. The point is, poor people who get sub-standard education are at a disadvantage in studies and employment if they haven't got training in computers and the internet.

The good news is that the government understands the problem of digital divide as a social psychological one. The 11th five year plan specifically mentions digital divide as a challenge of inclusive growth. Some initiatives in the local and state level have also been taken. For example, Anand is a cooperative body that has a computerized milk collection system; Bhoomi is an initiative of Karnataka government to maintain computerized land records.

Many effects of mass media are covered separately in the chapter on pro-social and anti-social effects of mass media.

n Role of Psychologists in IT and Mass Media Boom

Given the many psychological consequences of the boom in IT and mass media, many psychologists (called cyberpsychologists) are involved in research on the effects of this boom on the individual human being. Besides research, cyberpsychologists are also engaged in developing techniques to maximize the use of IT for people and make the human-internet interface more user-friendly. The role of psychology is not limited to the works of cyberpsychology; rather, psychologists have

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benefited in general from the revolution in communication technology. The recent developments in IT and mass media have thrown many challenges for psychologists in general. Let us discuss some of the major challenges faced by psychologists, and what role they play in e-age.

Online Therapy

The internet is a challenge and an opportunity for therapists. Internet opens up new modes of communication for psychologists to deal with clients. At the same time, there are certain concerns regarding the difference between cybertherapy and traditional therapy. An obvious advantage of online therapy is that the therapist and client need not be physically close to each other. The client can consult a therapist from any part of the world. Besides this, there are certain advantages from a psychological point of view :

1. **Anonymity** : Anonymity has positive impact on a client undergoing therapy. Anonymity makes them feel less vulnerable about participating in a group therapy. That is the reason why in Alcoholic Anonymous (AA), a participant has the option of disclosing her name and personal details. Internet is the ultimate tool of anonymity. Here, you divulge only that much about yourself as you desire. Davison and colleagues(2000) studied the nature of patients seeking social support online and found that people used internet social support groups particularly embarassing and stigmatized illnesses such as AIDS.
2. **Online disinhibition effect** : In the cyberspace, people tend to say things that they normally wouldn't in face-to-face (f2f) situations. Because of anonymity and invisibility, people become bold, uninhibited and disclose such personal emotions, fears and wishes that they normally wouldn't. This makes the task of the therapist easier. She can discover the conscious and unconscious emotions, cognitions and feelings of the client in fewer sessions.
3. **Flexibility** : There is greater flexibility in online therapy than traditional therapy. For *synchronous communication based therapy* like chat, you still need to take an appointment because the therapist and client chat in real time. Still, the appointment can be scheduled with greater flexibility. If the therapist and client are unable to fix a date and time for the chat, the therapy can continue via asynchronous communication means, such as e-mail. In e-mail therapy, both parties don't have to be online at the same time.

Inspite of these advantages, psychologists treat online therapy with caution. First and foremost reason is that the therapeutic climate of traditional therapies can't be replicated in internet communications. Most of the therapeutic methods were developed keeping in mind the face-to-face environment. We can't just replicate those methods in online therapy. New methods need to be devised; new methods that are more effective for online therapy. A second concern is about working with sensitive clients in shaky situations. For example, take the hypothetical case of a suicide-vulnerable client. The traditional therapist studies her behaviours to conclude that the client is vulnerable. Accordingly, the therapist can take remedial measures. But in online therapy, the non-verbal cues aren't transmitted. It is not always advisable to make conclusions based on text messages.

A third concern is that many counsellors without requisite skills manage to fool clients

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because of lack of regulations. An educational qualification is not sufficient to become a therapist or a councellor on the net. You need some training to work in the field of IT. There is no regulator to certify psychologists who work online. This makes it easy for those without necessary skills to fool clients.

Psychological Testing

An important role of psychologists is taking psychological tests and making assessments. The nature of this service is bound to change with the boom in IT. Many tests are now being administered through the internet. There are certain definite advantages of administering psychological tests online. Some of these, according to Barak (1999), are

1. Internet-based psychological testing enables fast, simple, convenient and highly accessible testing.
2. Tests are ready for scoring as soon as respondent has taken the test, as the whole process is electronic.
3. Electronic scoring is practically error free.
4. Updates of test items, scoring techniques, instructions, and norms are made at a central server and are active immediately.
5. Tests may be taken at any time and any place convenient to the test user.
6. One capability of internet-based testing that is impossible in standard testing is the use of three dimensional (3D) graphical interface. For instance, in tests of perception, 3D is necessary, and internet can provide the 3D effect.

Inspite of the numerous advantages of internet-based testing, there are certain concerns regarding it. Some of the important concerns that need to be addressed by psychologists in order to play the role of test-administrators on internet are (Barak, 1999) :

1. Many of the test questionnaires published on the internet are inaccurate. These haven't been developed according to accepted testing standards. As a result, the results of these tests are invalid. Test-takers have no way to determine the validity and reliability of these tests. The results may harm the confidence of test-takers or provide them wrong assessment, based on which test users are prone to take wrong decisions. For example, suppose I take an unreliable test which predicts that my ability lies in the medical profession, when in fact it lies in engineering, I may be prone to make an incorrect career decision that would change my life !
2. As all communication take place electronically, the test-taker doesn't know the people who run the testing website. They may have to give highly sensitive information to people they don't know. Hence, there is a problem of privacy here.
3. In order to bypass copyright violations, many tests published online are variations of the original tests. This compromises the quality of the test. Original tests are constructed after meticulous work on validity, reliability, standardization etc. Even minor changes affects the quality of test.
4. The test-taker has the right to guidance in every step of test administration. She needs guidance in understanding the instructions, in taking the test, and in interpreting the results. These services are not provided by the test user in internet-based testing. If you take an IQ test on the internet, you just get a figure as result. If you aren't a psychologist, what inference about yourself do you derive from "An IQ of 120" ? You are simply clueless as a layman.

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5. A basic concern is about the extent to which a paper-and-pencil test preserves its psychometric quality when administered online. A few tests are originally constructed for use in internet. But most are rip-offs of paper-and-pencil tests.

These concerns do not show the shortcomings of psychological tests online; rather, they are deficiencies to work upon so that psychological test administration through ITcan be improved.

Providing Self-Help Guides

Self-help guides are not a new psychological means of intervention, but the way self-help guides are assessed by people at large has changed owing to the internet. Self-help guides are psychological interventions that guide the individual to help herself in matters of assessment of a problem, evaluate the severity of the problem, understand the scope for positive changes etc. Self-help guides have been found to be extremely useful in helping people with issues like eating disorders, alcohol dependence, assertiveness, relationship difficulties, shyness etc.

Before the boom in IT, people who wanted self-help had to purchase relevant material or consult a library. Now, the scope of self-help guides has increased. People can easily access self-help guides if psychologists put them up on the internet. Making self-help guides for the internet throws new challenges for psychologists also. Unlike traditional guides that were in book format, the new guides can be more interactive. The psychologist can include graphics and video images to motivate the client.

Another benefit of developing self-help material over the internet is that people can access these in times of crisis. For instance, many adolescents face sexual problems (or have doubts regarding sex) which they can't discuss with others. Self-help guides provide relief from the trauma by helping them make sense of the problem. Similarly when faced with crisis situations, these guides provide immediate crisis interventions. The internet user can access help on any subject on the click of a mouse. For instance, Firm and Lavitt have shown that self-help guides for women who experienced sexual abuse and other such trauma experience are of great help. In another self-help intervention, Kovalski and Horan (1998) designed a website that identified maladaptive career beliefs of girls and offered cognitive restructuring intervention to change these beliefs. They found that the website guide had positive effects on many participants.

Human Factor Engineering

There are two major considerations that need to be made when designing a website : the *software codes* and *interactivity of the website*. Software codes are developed by software engineers using languages like HTML, XML, Java script, ASP, PHP etc. These codes are useful in storing the web information in a central server, and presenting the information to the web users when demanded. Interactivity refers to the web-human interface. How good a person-environment fit does the website provide? This issue is dealt by human factor engineers, and psychologists have a key role to play here.

Interactivity is the biggest challenge of all major developments in web technology lately. The web 2.0 technology is all about giving the users a better experience of the virtual world. When designing a good website, the personal preferences of target viewers have to be kept in mind. For instance, if you are designing a

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website for farmers who are less computer-educated, you must make the website simple and clear, make greater use of graphics and visuals etc. On the other hand, a website designed for engineering colleges can have complicated java applets and PHP features.

This work of psychologists finds applications in upcoming fields like e-commerce and web advertising also. Psychologists provide crucial insight into consumer behaviour on the internet. For example, Kargaonkar and his colleagues (2005) have found that the attention people give to web advertisements depends on their beliefs, attitudes and demographic factors. An advertisement should be devised incorporating these human factors for maximum success.

Other Roles

The roles played by psychologists in the recent boom in IT are many-fold. The prime factor in this is that psychological services are essential human services, and IT makes it easier for psychologists to provide their services to the people. The challenge here is to modify the services so as to effectively present them through internet and mobile phone media. Another major role of psychologists is to research into effects of IT on the individual, organizations, and society at large and provide solutions and interventions to mitigate the dysfunctional effects of IT.

n Training Psychology Professionals to work in the field of IT and Mass Media

As reiterated earlier, the nature of psychological services changes drastically when provided through IT and mass media. Most psychology professionals involved in providing services through traditional face-to-face communication can't replicate their professional skills on the internet. For instance, a professional therapist trained to provide therapy in face-to-face interaction can't just replicate her skills in the internet. The communication over internet is through text messages, or at max video conferencing. Similarly, career counsellors who practice in face-to-face (f2f) situation can't work with clients on the internet or in mobile phones. The new means of communication needs special training. Some of the important training modules that a professional has to undergo to work in the field of IT and mass media are discussed in this section.

Training in Computers and Internet

The first and basic requirement of working on the internet is to have pre-requisite knowledge about the computer and internet. The psychologist needs to be trained in how to troubleshoot any problem in her computer. If a client is in need of emergency help, she should be able to provide it even if her computer malfunctions. Secondly, various forms of communication on the internet and their psychometric properties need to be understood. Broadly, there are four forms of communication varying across two dimensions : synchronous-asynchronous and individual-group communication.

	Synchronous	Asynchronous
Individual (1-to-1)	Personal chat	e-mail
Group	Chat room	Forums and e-mail lists

The professional should be skilled in using all these modes of communication. The client may choose any of these modes for communication, as per her convenience. The professional also needs to be trained in the type

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of therapy or counselling that best suits a form of communication. For example, asynchronous communication doesn't happen online. The therapist/counsellor can reply to the client after a few hours, days, or even months. So she can formulate her reply at length. But in case of synchronous communication like chatting, the therapist has to give immediate reply. It is like face-to-face communication but not the same. In f2f communication, some visual and non-verbal cues are available that are absent in synchronous internet communication. Also, some cues of f2f therapy like empathy (it is an important element of client-centred therapy) are tough to present through internet. Hence, the professional needs to be appropriately trained.

A third major skill that the professional needs to learn is that of internet based money transaction. A professional should always charge money for her services. This is so as to ascertain that the client doesn't take the interaction for granted, and takes the sessions seriously. In order to charge a client, the professional should be skilled in dealing with credit card transactions. Many personal informations are passed on when credit card transaction of capital takes place. The professional should not only maintain ethics, but also ascertain that the client's credit card number is not being leaked to any hacker. For this, she should have training in network security. I have been to the websites of many self-help guides on the internet. I find security system of these websites very novice. If, for example, you are providing a self-help guide on sports psychology for a nominal fee of four dollars but your network security is so weak that any hacker can hack the client's credit card number, you are causing great monetary harm to your client.

Training in Virtual Reality

What is the use of working on IT platforms if you can't harness its special features! A major attraction of internet is that of graphics, 3D environment and virtual reality. Graphics and 3D are being used by educational psychologists to motivate students to learn through e-learning. This requires special training. The professionals should be trained in using and manipulating various image files, in creating various perceptions using graphics etc.

Virtual reality has immense applications in psychological research and applications. Virtual reality is being used in therapy, rehabilitation of drug addicts, and in simulation of real-life events. The professional needs to be trained in virtual reality. She should know how to simulate real world in the world of graphics and animation.

Training in Web Designing

The focus of web designing these days is shifting from *software coding* to *human factor engineering*. The goal is to make websites more and more interactive, and to tailor the website to the needs of the web user. Even small details like colour of the website, the way information is presented, the tables, the fonts, the letter size etc. should depend on the type of web user. It has been found that user beliefs, attitudes, personality and motivational pattern affect how a certain web design is accepted/rejected by the user.

The human factor engineer should be trained in technographics, online consumer research, web designing and some basics of software coding necessary for designing websites.

Training for Mass Media

Many psychology professionals are invited on TV and radio stations to give guidance on

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various issues like family matters, husband-wife relations, parent-child relations etc. They are also invited to give solutions to various problems in newspapers. Some psychologists have regular columns in the Sunday special editions of various newspapers. It is a matter of concern that these professionals are not trained specifically for appearing in mass media. Obviously, only those professionals with good communication skills appear in the media. For those, who don't have good communication skills, training in communication skills is necessary.

Psychology professionals are experts in their field, but when they appear in radio and TV the situation is different. Viewers and listeners pose certain personal problems to the professionals. In their regular services, psychologists study the detailed history of clients. But here they can't do so. Hence, when answering questions of viewers and listeners, they should not be directive. Special skills are required to provide solutions to problems posed in mass media. For instance, once I had heard a radio programme in which a caller stated that her boyfriend doesn't want to have sex with her. The guest psychologist stated that her boyfriend may be gay. There may be other reasons, according to me. The boyfriend may be shy, or underconfident, or too conforming to Indian values, or wants to go slow. Such judgmental answers by experts are harmful : the girl is bound to take the expert's advice at face value. Hence, the need for training.

n The Internet as a psychological space

'With the advance of computers and online networks especially the internet – a new dimension of human experience is rapidly opening up. The term "cyberspace" has been mentioned so often that it may at this point seem overly commercialized. However, the experience created by computers and computer networks can in many ways be understood as a psychological "space"..... [While interacting with the internet people] are entering a "place" or "space", that is filled with a wide array of meanings and purposes' (Suler, 1995-2008).

This is how Prof. Suler starts his online book on cyber psychology. Basically, he stresses on the fact that when we start "microsoft windows" on our computer, we basically open a window to another technocultural realm. According to Prof. Suler, one experiences the cyberspace as an extension of her mind and personalities – a "space" that reflects her interests, tastes and attitudes.

Hence, it is necessary to understand the cyber-experience. How is this virtual world different from reality ? To what extent does virtual reality conform to psychology of the real world ? Certain basic psychological features of the cyberspace (Suler) are :

1. **Reduced Sensations :**

   When interacting with a person over IT, we severely restrict the verbal and non-verbal communication cues. It is mostly through texting that we communicate. Video conferencing scales to reduce this gap in verbal communication, yet it can't let the user communicate non-verbal cues. Anyways, videoconferencing is not that popular; Gtalk and Skype that help users talk are increasingly getting popular, yet are severely constrained in communicating facial expressions and body language.

2. **Identity flexibility :**

   The lack of face-to-face (f2f) was has an

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interesting impact on how people present themselves in the net. While chatting or while texting in a forum, you can give yourself any name or even stay anonymous. You can disclose only part of your identity or be someone else when on the net. This is the reason why many fake profiles can be found in social networking sites like orkut.com. Even if the profile is not false, one doesn't usually disclose all that she/he is.

This again leads to a disinhibition effect. The inhibitions in talking f2f are absent. So you could either open up to anyone; or use this anonymity in the negative way to abuse other people.

3. **Equalized status :**

The internet is an egalitarian cultural space. Due to flexibility of identity, everyone has an equal opportunity to voice himself. Hence, it is often referred to as the "net democracy". Of course, your writing skills, your persuasive ideas and your technical expertise may make you a first-rate citizen in the net (as the hackers are ! as the bloggers are !) but there is no distinction on the basis of caste, creed, gender and race.

4. **Altered Perceptions :**

Meditation is often called as the fourth state of consciousness after awake, sleeping and hypnotic states. Prof. Suler argues that the cyber space provides an altered and dream-like state of consciousness. I would call it the fifth state of consciousness : here, multimedia and especially 3D animations have altered the laws of gravity and of existence ! It is an imaginary world where you can exist as an individual. For instance, while playing the game counter strike, with others connected on the internet, you live the life of the terrorist or counter-terrorist you play in the game. The counter strike arena is fictitious, so are the guns ..... hence altered perception.

5. **Temporal Flexibility :**

In face-to-face (f2f) meetings, you usually don't get much time when responding to the other person. However, in IT-based communications, you get a significantly longer delay. This provides some time for reflection. Over the internet, there are two types of communications : Synchronous communication i.e. communication in real time, like chat and IM; and asynchronous communication like e-mail communication and posting in forums. In both cases, one has sufficient time to reflect before communicating back.

n Entrepreneurship through E-Commerce

Electronic Commerce, or simple e-commerce, has opened up a large door of opportunity for the enterprising individuals. Basically, the internet as a media provides an altogether new channel where an entrepreneur can start off and reach a huge consumer base cutting through geographical barriers.

The risk involved in e-commerce is still high; hence, the entrepreneur needs to be aware of basic psychological processes of the consumer. Only by an understanding of the consumer, her psyche and what she desires, an e-commerce venture can be successful. For example, a customer may buy an i-pod from a shopping mall. There, she gets a shopping experience. How do I, as an entrepreneur, induce her to rather buy my product over internet ? In every stage of starting an e-commerce business, the

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enterpreneur needs to apply psychological principles. These stages are :

1. Understanding consumer behaviour on IT
2. Task Analysis
3. Strategy
4. Web designing : Software Engineering or Human Factor Engineering ?

1. **Understanding consumer behaviour on IT :** The consumer who uses the internet can't be sketched as a single stereotype. The tastes of consumers are as varied as their lifestyle, attitude towards technology and IT and online skills. For example, it is foolish for an entrepreneur to sell fertilizers to small farmers on the internet – these farmers don't have a positive attitude towards technology. Yet, youths attached to farming families can be targeted as they have a positive attitude towards IT.

   Scholars have found that various e-shopping personalities can be represented by a continuum with goal-oriented personality and experiential personality at the two ends. For our analysis, we will take these as types rather than points on a continuum.

   Consumers with goal-oriented personality have an internal locus of control; prefer convenience and low sociability and if proper information is available, would prefer shopping online rather than go to a shopping mall.

   Experiential shopper, on the other hand, shop to 'experience' shopping – shopping is fun for them. If you regularly visit the mall on one pretext or the other, you have an experiential personality. My mother has an experiential personality – she would rush off to the market every evening and try out new products ! Experiential shoppers prefer to physically examine products and are less likely to buy online (Novak, Hoffman and Yung, 2000).

   Suppose you are an entrepreneur about to start your own e-commerce business. How do you attract the customers of above two personality types ? It is less challenging to attract the goal-oriented shopper. You just have to provide genuine information and give him the option to choose from a wide range of products. With 'choice' and 'information', these shoppers – with an internal locus of control – would prefer e-shopping. However, care must be taken to present the information coherently and not to overload the consumer with information.

   For an experiential shopper, experience makes the difference. She browses largely to be entertained. She mainly browses for auctions, bargains (experiential shoppers are bargain hunters) and for hobby-type activities. Hence, auction sites like -ebay have greater "stickiness" than other e-commerce sites for these shoppers.

   A skilled entrepreneur can cater to the needs of all personalities of consumers ..... for example, rediff.com is a site that provides immensely useful information, has a variety of products you can choose from; at the same time has many bargain offers, discounts and auction facilities.

2. **Task Analysis :**

   Suppose I want to start an e-commerce business to sell books to Indian readers. The problem I face here is, I don't know anything about fiction lovers of India. Here, I need to hire a psychologist as consultant. The psychologist does task analysis to identify the user : her background, knowledge base, expectancies, values, tastes etc. Secondly,

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what kind of interaction has every user desire with the website ? Does she need to read reviews before purchasing a book ? Does she want to know the comments of other customers ? Does she want to discuss the book with others ? Based on the users and their interaction needs, the psychologist guides the web designer in making the web-site.

Thirdly, targeting online consumers is also a challenge. To do this, one must know about the consumer and where she can be found on the web ! Forrester's Technographics segments consumers into ten segments based on :

1. Attitude towards technology
2. Income
3. Motivation to use technology

For specific e-commerce business like selling rock music videos, one needs to find more about the tastes of target consumer.

3. **Strategy :**

Any e-commerce business strategies on three primary factors :

(a) Reach
(b) Affiliation
(c) Richness

Reach refers to (a) how many customers can a firm reach to and (b) how many products or services can be provided to the customer. E-commerce here has an edge over traditional commerce in that it has larger reach. Yet, how do you induce the customer to visit your site ? How do you built a loyalty ? Here, **affiliation** is a must. Strategies to develop loyalty must be developed. **Richness** refers to the type of information and amount of information provided to the customer.

Some recent researches have revealed that traditional concepts in consumer psychology can't be suitably applied in strategizing reach, affiliation and richness over the internet. The internet is a novel psychological space and its orientations are different. Unfortunately not much research has been done regarding it.

4. **Web designing :**

A website is an interface between the entrepreneur and his clients. Website development is the most important step in development of an e-commerce business. So who should design the web site. Is it the entrepreneur himself ? Or a professional software engineer ? Or a human factor engineer ?

A software engineer is extremely skilled in various web languages like HTML, XML, Javascript and AJAX. As a result, she can give the website extreme flexibility. Unfortunately, she doesn't know anything about the user who would use the web site. Today, not only has the population of users in the internet expanded but the variety of users also has expanded. Every user desires an interaction with the website specific to the user. The software engineer is not aware of these individual differences. Hence, a system designed without consideration of the user will not be successful.

For instance, a website for university professors can afford to be complex with cutting edge features. However, a blog for the average housewife has to be user-friendly and easy to use. Hence, the need for human factor engineer (HFE). The role of software and human factor engineers are not contradictory but complementary. HFEs have conducted considerable research to apply psychological knowledge to different aspects

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of web designing. Research has been conducted to identify problems associated with website navigation, search effectiveness on Google and other search engines, browser compatibility etc.

For example, Lynch and his colleagues (2001) have found that site quality, trust and positive affect are critical in explaining purchase intention of an user.

The steps that a HFE follow to design a website are :

Psychographics
↓
User characteristics and Preferences study
↓
Compatible website design
↓
Information organization

For instance, suppose you want to make an art website. Psychographics helps you know the user characteristics and preferences. This information you use to design a compatible website that would suit the tastes of art lovers. Then you organize information so that user doesn't experience information overload and finds it easy to perceive the contents i.e. can easily navigate and access the webpages.

n Multi-level Marketing

Traditional marketing involves selling a product to the consumer. It includes marketing research to find out consumer behaviour, tastes and attitudes, advertising and taking feedback from the consumer. The marketing that has become popular in internet is of a much different type called **affiliate marketing,** here marketing involves multiple levels of marketers.

To illustrate, let us take the case of "Google Adsense", the leading affiliate marketer. An e-commerce business owner's first objective is to get visitors to his website. How to get visitors? One way is the visitors search in Google and reach to the website. But there are many such websites ! So the owner wants to market the products/services posted on his website. To do this, he gives (say) Rs. 10 to "Google Absense" per visitor. He can't directly market his product to end-users as these are many and located at different placed geographically. Google Adsense makes an advertisement banner of the product. Then Adsense asks other website publishers to host these ads on their sites. For instance, a blogger (level 3) can put the ads of Google Adsense. Any visitor to the blogger sees the ad. If he clicks on the ad, he is directly taken to the e-commerce website. For the click, the blogger is paid Rs. 7, Adsense keeps a commission of Rs. 3. (this is just for illustration).

E-commerce owner
↓
Affiliate marketer
↓
Affiliate web publisher
↓
Visitor

Multilevel marketing involves many challenges regarding consumer behaviour, though of a different kind than traditional marketing. The concern of an affiliate publisher (here a blogger) is : where should I put an advertisement on my website so as to induce my visitor to click on it and visit the link ? The affiliate marketer (here Google Adsense) is concerned : how should I design the advertisement so as to induce the visitor to click on it ? Should I put information text or images?

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What should be the size of the ad for right perception ?

Many cyber psychologists have conducted research on above issues. For example, the concern of an affiliate publisher is to increase the click-through rate. It is the ratio between the number of visitors who click on an advertisement and the total number of visitors to the publisher's website. (here publisher means web publisher – usually those who have their own websites).

Korgonkar and his colleagues (2001) recommend from their research that factors such as attention people pay to web advertising and the frequency of clicks depend on web user's beliefs, attitude and demographic factors. **Eye tracking experiments** have demonstrated that internet users tend to avoid seeing ads when they become more experienced with the internet. These research findings help the affiliate publisher to design the website and in placing the ad at appropriate place.

The **affiliate marketer** is concerned primarily with form factors i.e. form of the advertisement. To optimize his revenue, it seeks to understand the effect of size, of animation, image, text and background colour. For example, it has been found that users get irritated with flashy and animate ads, especially the banner size ones (Chandon and Chtourou)

The e-commerce entrepreneur is also helped by psychological research in many ways. While the seller (of products and services through e-commerce) has outsourced a part of the marketing to the affiliate marketer, for long-term benefits he has to build a brand image. To build a brand image, he has to use a communication strategy that increases brand recall and attitude towards the brand. Even if a customer doesn't click on the ad, if the ad is successful in affecting the cognitive and emotional modalities of the customer's psyche, the customer may later visit the website by herself. For example, a few days back I say an interesting advertisement of www.simplymarry.com. It had an interesting punchline about conducting Swayamvara for the metropolitan bachelors. I being busy in another work, couldn't click on it and check the site. But later I myself went to the site. This change in my behaviour was because of the persuasive nature of the ad : it had affected both my cognition (a new matrimonial site for city residents !) and emotion (yes, I am a metropolitan bachelor !).

Psychologists are also employed to understand ad effectiveness i.e. how effective is an ad in changing the three components of attitude : cognitive, affective and conative.

n Distance Learning through IT and Mass Media

Traditionally, distance education used to take place in a very restricted manner : a student enrolls, receives curriculum materials in the mail, works on these materials, and submits assignments through post. Hence, the nature of learning was slow and ineffective. The advent of IT and Mass Media has brought about a revolution in distance learning. Now, scholars see the possibility of distance education being as effective as school education. This has potential of revolutionary consequences. However, for distance education to substitute school education, the use of technology (IT and Mass Media) has to be made more effective from a psychological perspective. There are numerous challenges in successfully effecting this.

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Basics of Learning

Before going into the details of distance education through IT and Mass Media, we need to understand the basic principles of learning. This help us appreciate the challenges of e-learning better. Basically, there are three approaches to learning :

1. Behaviourist Approach
2. Cognitivist Approach
3. Constructivist Approach

Behaviourist Approach

The behaviourist approach to learning is based on the belief that the instructor's role is to transmit information to the student in small chunks and provide immediate feedback to the student's responses. Hence, the implication for e-learning are easy to implement. Two popular behaviourist strategies that can be communicated via mass media are programmed instruction and directed instruction.

Programmed instruction was pioneered by none other than B.E. Skinner (1968). Here, the content is broken down into learning units and arranged into frames presented with increasing difficulty. The feedback is prompt as assessment is done everytime the student moves from one frame to another. Also, learners have the ability to move at their own pace. Learners can not jump frames; they can cross over to another frame only after gaining mastery in one frame.

In directed instruction, the instructor 'articulates learning objectives, then breaks them into their component tasks and works students through them in a hierarchical fashion, leading students incrementally from the "bottom up". Recognizing and mastering key concepts is made easier for students by isolating each component, allowing learners to master one component before learning the next, and providing students with explicit, teacher-directed instruction and practice' (Lowerison et al., 2008).

Cognitivist Approach

Cognitivists go a step further from the behaviourist by addressing issues relating to how learners cognitively process learning material. Just like the behaviourists, cognitivists design e-learning wherein knowledge is transmitted. But unlike the behaviourists, cognitivists are concerned with the active processing of information, and how knowledge is organized in the brain (Lowerison et al., 2008).

An e-learning model based on cognitivist approach in e-learning is Merrill's Instructional Transaction Theory (ITT). ITT emphasizes on development of simulations and graphics for more effective learner guidance. It also attempts to mould instruction to adapt it to individual learners in real time.

Constructivist Approach

The subject of learning in most modern educational organizations today is shifting from behaviourism towards constructivism. The constructivist approach is based on the belief that knowledge is constructed by the learner and the job of the teacher is to provide environments that would help the learner explore and construct knowledge. Hence, the role of the instructor here is to provide tools and resources to the learner to build their own knowledge.

It is in constructivist learning that the job of e-learning becomes much more challenging. The goal is not just to provide information, or to aid in information processing, but to provide a rich experiential environment within which the learner can work. According to Clark (2006),

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many implementations of constructivist learning environments in distance learning fail to fully realize what constructivist learning is.

A popular model based on constructivist approach is problem-based learning (PBL). In PBL, a problem is presented and learning is driven by the experiences of the learners while finding a solution.

Distance Education through IT : A SWOT Analysis

The issue that is bothering psychologists at this moment is that while e-learning has many advantages to traditional classroom learning, there are certain advantages of face-to-face instruction that it can not replicate. In this section, we will investigate some of the strengths and weaknesses of e-learning.

A few strengths of e-learning are :

1. The access to information becomes easier.
2. There is a greater flexibility of learning environments. The learner can study using a software/platform that she is comfortable with.
3. Education can reach many inaccessible parts of India.
4. Instruction is personalized.
5. Learner's control over the learning process increases. She can proceed at her own place.

Major challenges for e-learning are :

1. How do you sustain learner's motivation in e-learning ? In classes, the teacher sustains motivation of student by various techniques discussed in the chapter on educational psychology. For example, the teacher may praise the student in front of other students which enhances the student's motivation. But what about e-learning ?
2. There are certain domains of learning, such as psychomotor learning and attitudinal learning which can best be done by face-to-face interaction. For example, if you want to change a student's attitude towards corruption, you need to provide her with a role model she can identify with.
3. A major function of the classroom is to help in the socialization of a child. By interaction with other students and peers, the student gains social skills. This is absent in e-learning.
4. Very frequent use of internet may lead to tendinitis. Tendinitis is an abnormal expansion of fingers due to overuse (working on keyboards and mouse). Also, there is danger of Internet Addiction Disorder and over-reliance on internet.

From the above discussion, certain general conclusions regarding distance education can be made, such as :

1. E-learning as a stand alone learning device is not effective. It has to be supplemented with classroom learning. For example, IGNOU courses are mostly imparted through e-learning. However, IGNOU has study centres in most towns of India, where face-to-face interaction with tutor is available on Sundays. E-learning is a very effective mode of teaching managers and technical staff in organizations. Training in organizations can heavily rely on distance education via IT.
2. The best e-learning tools are adaptive hypermedia. These are softwares that adapt to the learning styles (refer chapter on education psychology and cognitive abilities of various students.

E-learning is, at times, more effective than traditional learning for students with mental retardation. For example, Justine Cassell of North-western University has found in 2008

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that children with autism can develop advanced social skills by interacting with 'virtual children' and 'virtual teacher' which might not be possible by hanging out with real children or teachers.

Researchers have developed softwares that present 3-D animated tutors who talk to students with retardation, learning disabilities, and other such problems and develop language skills in them. Such softwares have also been found to be effective in second language learning. So if you are interested in learning a foreign language, you can sign up for a good distance education program on the internet.

n Motivation Models for Distance Learning through Internet

It has been found that a general drawback of distance education is that the learning interactivity is very trivial. E-learning and learning through other modern means of mass media do try to plug the shortcomings, but still there are issues of keeping the students motivated. The drop-out rates in e-learning tend to be higher than in face-to-face settings; and learners often feel isolated (Moore and Kearsley, 1996). Hence, many psychologists have focussed on developing models that would help keep up the motivational levels of learners in e-learning. Two popular models are the **ARCS Model and time continuum model**.

ARCS Model

The ARCS model (Keller, 1987) is a method for systematically designing motivational strategies into e-learning materials. This model presents :

1. Four categories of human motivation.
2. Strategies for enhancing motivation within the above four categories and
3. A four step design process to incorporate above strategies into instructional material.

The four categories of human motivation according to ARCS model are Attention, Relevance, Confidence, and Satisfaction (hence the name ARCS). Let us discuss these in greater detail :

(a) Attention

The first step to any instructional learning is attention. The learner's continued and sustained attention is essential. For this, the learner's curiosity should be aroused. Regular study material presented in conventional fashion often tends to lead to boredom. The level of curiosity can be sustained and increased by the use of graphics or animation. Use of mystery, puzzles, unresolved problems, variability etc. are other important tactics of grabbing attention.

Carmen Taran (2005) suggests the following techniques for grabbing attention :

1. Manding stimuli
2. Anticipation
3. Incongruity
4. Variability
5. Humour
6. Inquiry
7. Participation
8. Story-telling

Mands are statements associated with highly probable behavioural consequences. For instance, your attention is automatically focussed to a source of stimuli that yells "watch out !". Some good examples of manding stimuli are "note that", "please remember that", "it is important to realize that" etc. (Taran, 2005). Incongruity is a conflict between what learners expect to see and what occurs. It increases sensory stimulation, and thereby attention. If

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you can induce the student to ask "how come?", then it means you have succeeded to draw her attention.

Variability is an obvious means of grabbing attention. Variability can be maintained in e-learning by constantly changing the manner of presentation and instructional material. Further, participation enhances attention. Hence, Taran suggests learning activities such as practice exercises, games or simulations that increase participation and interaction enhance attention.

(b) Relevance

Attention is a necessary but not sufficient condition for motivation. The learners need to perceive the learning material as consistent with their goals, and compatible with their learning styles (Keller and Suzuki, 2004). To increase relevance, it is suggested that a choice in methods of accomplishing course goals can be made. Also, guest lectures can be arranged where those who have successfully finished the course explain how it has been relevant and useful to them in their profession and personal life.

Also, it has been noted that goal-oriented behaviour can be due to intrinsic motivation or extrinsic motivation (Deci and Ryan, 1985). For extrinsically motivated students, a clear link between content of e-learning and future career prospects can be made intrinsically motivated students the instructional material can be made rich and diverse.

(c) Confidence

A basic consideration for learning, whether classroom learning or distance learning, is self-efficacy. Self-efficacy establishes positive expectancies for success, and hence motivates the student. On the other hand, if an instructional material is tough to understand, the learner's confidence is low and she may even give up. A major reason for high drop-out cases in education is lack of confidence on self.

Confidence can be increased by a range of strategies, such as :

- Clearly stating learning goals
- Setting realistic goals
- Organizing material in increasing order of difficulty
- Attributing success to the learner's effort and ability.

(d) Satisfaction

Satisfaction is an important motivator in the sense that it fosters positive feelings about the learning experience. Certain strategies to foster satisfaction are :

- Verbal reinforcement
- Rewards
- Feedback
- Personal attention
- Deliberate avoidance of negative influence such as threats, external performance evaluations and overt surveillance (Hodges, 2004).

Now, let us turn to the design process recommended by ARCS Model. This process has four steps :

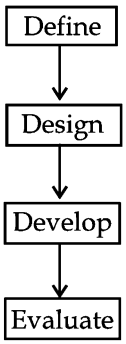

Fig : Design steps of ARCS Model

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These steps can be summarized as :

1. **Define :** Define the motivational problems involved in the instructional material. Then analyze the learners and prepare motivational objectives.
2. **Design :** Design the strategies based on the motivational objectives. For example, if the objective is to increase relevance by intrinsic motivation, the strategy designed may be to provide diverse and extensive study material. If it is to increase relevance by extrinsic motivation, then the strategy may be to link the learner's career objectives to the course material.
3. **Develop :** After defining the motivational objectives and designing the strategies, next comes the development of the instructional material. This is the execution proper.
4. **Evaluate :** This is the feedback step which gives information about the extent of success of above three exercises.

The Time Continuum Model

The time continuum model of Wlodkowski (1985) identifies three critical periods in the learning process where motivational strategies should be introduced. These period are at the :

- Beginning of the learning process
- During the learning process
- At the end of the learning process

"The factors to be considered at the beginning of the learning process are attitudes and needs. When planning the beginning of a learning experience, the designer should consider how the instruction will best meet the needs of the learners, and how a positive learner attitude can be developed. Wlodkowski (1985) provides many strategies to address learner attitude. The strategies are centred on easing into the course with icebreaker activities, stating clear objectives for the course, and various strategies to help the learners develop a clear understanding of what will be required to be successful in the course ..... a needs assessment should be performed prior to developing the instruction to aid in appropriate planning' (Hodges, 2004).

During the learning experience two factors, namely stimulation and affect, are to be considered. To maintain a stimulating learning environment, learner participation has to be enhanced. This can be done via questions, humour, varying presentation style, and the use of different modes of instruction. Finally, at the end of the learning experience, competence and reinforcement are to be considered. Wlodkowski recommends frequent feedback and communicating learner progress as main practices to foster motivation at the end of the learning experience.

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16

Media Influences on pro & anti-social behaviour

The S–O–R revolution in learning brought to the fore the concept that behaviour is learnt by observation also. Bandura's classic experiment on modelling (1985), now famous as the "Bobo dolls experiment" first time showed that television viewing may have a bearing on attitude and behaviour.

In this experiment, three groups of children were shown a film in which a model acts aggressively towards a "Bobo doll". The first group showed the model being rewarded with prasie; the second group saw the model being reprimanded for aggression, and a third group saw no consequences for the model. After the viewing, each child was places in a room with many toys, including a Bobo doll. It was found that children who saw the model being punished showed greater aggressive actions towards the Bobo doll than others. Ever since this experiment, many other experiments have been conducted on effects of media on behaviour. The effects, as seen from the Bobo doll experiment, are both positive and negative i.e. media depictions can lead to both anti-social and pro-social behaviour. The effect is **anti - social** when viewers watch an excess of **violence**, or **pornography** regularly or play violent videogames. The effect is pro-social when media leads to awareness and sensitization about social problems, empathy, altruism and sharing. This chapter deals with all these issues, so also with issues relating to research findings. On critical analysis, it can be found that effect of mass media on behaviour is quite ambiguous in research literature. In deeper appraisal of various research findings, it can be seen that most research findings don't reveal a cause-effect relationship. These issues are discussed later in this chapter.

n Violence & Aggression: Depiction in Media

Psychodyanmic theorists believe that watching violence has a **cathartic effect** on the viewer, enabling her to discharge her "thanados" instinctive energy by acting out vicariously through identification with fictional aggressors. Media is an outlet for these innate

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impulses, developed by modern society. Other media psychologists don't usually subscribe to this view, specifically owing to many research findings showing that media violence does lead to certain negative effects on the individual. Some of the major effects of television violence are (Donnerstein, Slaby and Eron, 1994) :

1. **Aggressor effect** i.e. increased meanness, aggression and violence towards others.
2. **Victim effect** i.e. increased mistrust, fearfulness or what is called the **mean-world syndrome**.
3. **Appetite effect** i.e. increase in self-initiated behaviour to further watch violent material.
4. **Bystander effect** i.e. increased desensitization, callousness, and apathy towards other victims of violence (p. 240).

Why does media violence lead to these effects ? Many theories have been forwarded to explain this and multiple psychological factors may be involved in this. Some of the factors involved in reflection of media violence in anti-social behaviour are :-

1. **Imitation**

   The Bobo dolls experiments explained earlier have been used by Bandura to explain that media violence is reflected in behaviour by role modelling. However, the bobo-doll studies have been severely criticized also. These studies had low external validity. The laboratory conditions were artificial and not representative of real-life conditions. Secondly, the experiments showed only immediate after-effects of media, if at all. Between a child viewing a TV program and his acting, there may be days, even months gap. The laboratory experiments studied the children only immediately after showing the films. Lastly, the video footage that was shown was that of some models hitting at Bobo dolls. This doesn't bear any resemblance with violence that is depicted in media. Rather, the models hitting at Bobo dolls may have led the children believe that the experimenters want them to hit at Bobo dolls !

   Today, the Bobo doll experiments cannot be replicated due to ethical considerations regarding its effect on children. Hence, most researchers use naturalistic forms of enquiry, like surveys and self-report measures.

   It is is agreed that initiation is indeed a factor in media influence. However, personality variables of the viewer, the attractiveness of, and the degree of identification with aggressive models enhances the effects of media violence. (Donnerstain and Smith, 1997). Indeed, some people complain that media violence glamourizes aggression and makes it an attractive behavioural choice.

2. **Excitation**

   Another explanation for violent behaviour influenced by media is the excitation transfer theory of Dolf Zillman (1971). This explanation is based on Schachter and Singer's (1962) two-factor theory of emotion. The theory states that when any stimuli leads to physiological arousal, we assign a **cognitive label** to the arousal depending on various situational & personal factors. In the context of media, an example can be cited. Suppose I watch a violent movie and get very excited (aroused). While coming back

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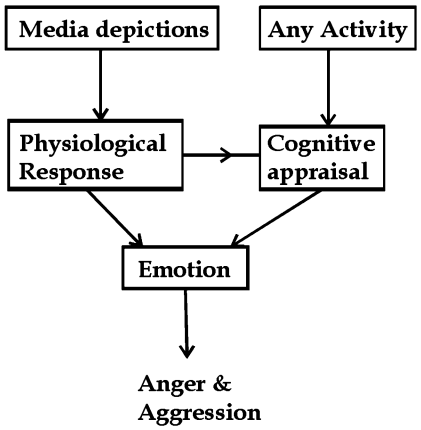
from the multiplex, I may get into a trivial argument with the taxi driver. Misinterpreting may arousal I am more prone to behave more aggressively with the driver than otherwise. The mechanism is as follows :

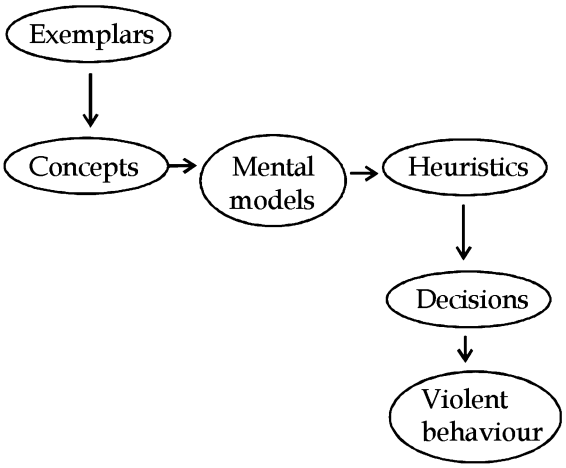


Problem with this explanation is that it explains only the *immediate after-effects* of violent movies. The physiological arousal after seeing the movie remains only for a short time after the movie. Besides, such arousal is possible even after seeing children's movies like Harry Potter and Spiderman, let alone violent movies !

3. Cognitive factors

Numerous cognitive factors may act together to lead to violent behaviour. Many theories have been forwarded to explain these factors. A look at these theories at this stage is appropriate :

(a) Exemplification theory : This theory states that media images and information act as exemplers. Exemplars are instances that together lead to formation of concepts and ultimately mental models. Hence, pro-social information or anti-social information depicted in media influence mental models, which in turn influence decision-making. Decisions made in real-life situations affect behaviour.



(b) Priming theory : Priming is a process in which one stimulus is linked to another. For example, if terrorism is primed to archetypes of minority communities in news channels, this leads to strong causal attribution of minority community to terrorist behaviour.

(c) Cultivation theory : It states that world-views are 'cultivated' by media over many years. Due to this perpetual cultivation, some **permanent schemes** develop in individuals which take them away from reality. For example, more violence is depicted in T. V. than normality. This is continuously depicted in media day after the other. Ultimately it gets cultivated into a permanent schema and the viewer starts believing that violence is too frequent.

These theories aren't contradictory, but complementary. They provide different mechanisms linking media violence with

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decision-making in real life. For example, exemplars are cultivated due to media. Further, unconscious memories of violent scenes are reactivated if appropriated cues are found in stimuli. (Berkowitz, 1984).

n Pornography

Questions have been raised about how pornography affects a man's sexual attitudes and how it leads to sexual violence and rape. It has been found that many pornographic material model rape myths, suggesting that **men are entitled to sex, women enjoy rough sex** and **only bad girls get raped**. Russell (1984) considers rape myths as a factor affecting men's attitude towards rape. For instance, one study (see Zillman & Bryant, 1989) has found that after five days of viewing pornography, participants gave shorter prison sentences to rapists in a mock trial. This confirms Russell's argument that pornography predisposes men to consider rape as an acceptable behaviour.

Another major effect of pornography is desensitization. Viewing explicit material for a long period of time instills an appetite for even-more extreme material. In an experiment, Zillman and Bryant (1982) showed pornography once a weak for six weeks to an experimental group. Later, when left alone with an array of pornographic videos, participants of experimental groups chose significantly more XXX material than control group members. In another study, they found that both males and females reported lower sexual satisfaction with their partners after viewing six weeks of pornographic material.

Thirdly, regular viewing of pornography also increases the incidence of violence against women. In one study (Malamuth et al., 2000) a causal link between violent pornography and violence against women was established. In this study, three groups of male college students was taken. These groups were randomly assigned to watch three kinds of pornographic material :

1. Neutral videos
2. Sexually explicit but non-violent videos
3. Sexually aggressive videos

Later, the participants were required to interact with a female. They were asked to quiz the woman with questions related to general knowledge, and to punish her with electric shocks for errors, the intensity of shock varying. Malamuth and her colleagues found that strongest experimental effects (i.e. high shock for wrong answers) emerged when participants viewed violent pornography.

Violent Video Games

Do violent video games breed aggression ? Yes, argues Davis Grossman (1996). According to Grossman, humans have a natural inhibition against killing. Violent video games weaken players' inhibition against aggression towards others. In one study (Gentile et al., 2004), it was found that young adolescents exposed to more violent video games also scored higher on psychological tests of hostility.

In another experiment where exposure to violent video games was directly varied (Irwin and Gross, 1995), two different groups of 7-8 year old boys were asked to play two different games : *Double Dragon* (a violent game) and *Excite Bike*, where the player raced a motor cycle against the clock (but there was no violence). After playing the games, each participant engaged in a 102 minute 'free play' with another boy. It was observed that compared to the players of Excite Bike game, the players of

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Double Dragon exhibited more physical and verbal aggression.

Consumerism

Mass media has facilitated the access of marketers to the consumer's psyche through advertisements. Need are being created by anchoring role models in advertisements and by changing life goals, interests and attitudes of consumers. Consumerism leads to a consumerist culture where people keep consuming (without limits) without any increase in level of satisfaction or happiness. This 'conspicuous consumption' may lead to increased exploitation of natural resources. Increased consumption (of lets say petrol) also leads to increased pollution and environmental degradation.

Hence, we see that a psyche of consumerism is embedded in an individual by priming of advertisements, which has grave consequences.

Research into the influence of media on aggression and violence : A critical evaluation

Many research results have firmly established the fact that media violence is a causal factor in aggression and violence in viewers. Or have they ? There are certain inherent problems in psychological research, due to which the various findings aren't beyond doubt. Broadly, there are three kinds of researches conducted on media influence :

1. Experimental studies
2. Correlational studies
3. Field studies

The major problem with experimental studies is their **artificiality.** These studies are conducted in laboratories. Here, one can't measure the effect of media violence on people in the long term (say one year). The immediate impact is what is observed. Secondly, the situations created to observe violence aren't representative of real life situations.

Correlational studies are studies in which a relationship between media violence and violent behaviour is established. For example, in one study (Maintyre and Teenan, 1972) subjects watched certain videos and a violence rating was assigned to each of these videos. The participants were also rated on their deviant behaviour. A significant positive correlation was found between viewing of television violence and aggressive behaviour.

A major drawback of correlational studies is that they don't tell us about the cause-effect relationship between the two variables. It is possible that a third factor has caused both the two variables. Many researchers have tried to minimize this deficiency by controlling the impact of a third variable. Still, another deficiency remains. If variable X is correlated with variable Y, has X caused Y or Y caused X? In deed, Chaffee and McLeod (1971) have created two hypothesis. Correlational studies can falsify (or prove true) both hypotheses but can't say of these two which is correct.

Hypothesis 1 : Television violence increases aggressive behaviour

Hypothesis 2 : Aggressive people watch violent TV programs

Similarly, **field studies** have some inherent limitations. They can't be replicated and there is a long list of mediating variables that can confound the relation between media violence and viewer aggression.

The exact effects of the influence of television

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violence can't be easily determined because the stimulation provided by videos and television programs can interact with several other extraneous variables. Specially in the case of longitudinal studies (that are ideal in establishing a relationship between the two variables), there are too many intervening factors. Hence, research findings point towards a positive correlation between media violence and individual aggression but the results should be taken with a pinch of salt.

Media influences on Pro-Social Behaviour

Prosocial behaviour refers to a variety of behaviours; there are diverse behaviours that come under the umbrella of prosocial behaviour. Behaviours like altruism, empathy and sharing are examples of pro-social behaviour. An awareness about social problems and action towards solution of these problems also form part of pro-social behaviours.

Many research findings have shown a positive correlation between pro-social media and pro-social behaviour. These can be discussed under the following heads :

1. Media and Children

Psychological literature on children and media agree to the fact that educational media are hugely beneficial for children. Greenfield (1984), for example, has shown that screen presentation of educational material can be highly successful if used as supplement with printed texts.

In one experiment, investigators tried to study the effect of a TV model on six-year olds (Sparfkin, Liebert and Poulous, 1975). One group of children viewed an episode of Lassie in which there was a rescue scene; a second group viewed the same show without such a scene, and a third group watched a humorous episode of Brady Bunch. After seeing the shows, the children participated in a game in which winner could receive a prize. In the midst of the game, they came in contact with a group of puppies who were whining unhappily. The first group spent more time in trying to comfort the puppies than other groups inspite of the fact that stopping to help the puppies would interfere with their goal (to win the race).

There are, however, certain mediating factors in relationship between pro-social media and pro-social behaviour. The moral development of children is one such factor. In one study, Zillman and Bryant(1975) examined the empathetic response of two groups of children who were in two different stages of moral development to a fairy tale program. In the fairy tale, a good prince is cheated and banished from his empire by a bad prince. He subsequently returned and had revenge. Three different climaxes were shown :

1. The revenge was mild and forgiving.
2. Revenge matched the wrong done by initial wrong.
3. Revenge is unnecessarily brutal.

It was found that older children displayed highest facial joy for second ending. They favoured neither mild revenge nor extreme revenge. But same was not the case with younger children. This shows that empathy is strongly determined by character judgments.

2. Sensitization to Social Problems

Media plays an essential role in sensitizing viewers towards social problems. TV viewership increases the awareness of people towards various problems like HIV-AIDS, drug abuse

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and alcoholism etc. However, the type of media one is exposed to makes a difference in level of awareness.

In one study, Ananga Lavalekar (2000) of the Jnana Prabodhini's Institute of Psychology in Pune examined the degree of awareness pertaining to social problems among high school students in relation to media. It was observed that the choice of media and children's awareness of social problems were positively related. The students with larger exposure to "masala" movies had significantly less information about the social problems as compared to those who had less exposure to films. Also, students who preferred to read mostly the sports and movie supplements of newspaper had significantly less information about social problems as compared to those who prefer science supplement.

Lavalekar argues that if media is used properly and methodically according to the needs of different age groups, it can work wonders.

3. Health Awareness

Media is an invaluable means of communicating information. Media has played an important role in promoting desirable behaviour like road safety and handling electric equipments. Media has also played an important role in communicating health messages, like those of HIV/AIDS, smoking, drug abuse etc.

How effective are these campaigns ? In a field experiment in Tanzania, Vaughan and his colleagues(2000) studied the effect of a soap opera transmitting a program about HIV on Radio Tanzania. The program had three kinds of role models : positive models who had lesser sexual partners and practised safe sex; transitional models who initially practised unsafe sex but changed their behaviour later in fear of AIDS, and negative models who had many sexual partners and practised unsafe sex. The negative models ultimately die. In this five-year longitudinal study, Vaughan and his colleagues studied the effects of the radio program on listeners' attitudes and sexual practice; they found a reduction in prevalence of unsafe sex among those who listened to the soap opera.

Mass media also is useful to the community psychologist who is involved in community-based interventions. In a village-based study in North India, A. Agarwal (1995) identified many issues in the use of mass media for prevention of diseases, recognition of symptoms and health promotion. This study showed that impact of mass media is substantial when it is used in conjunction with factors such as social participation in community, interpersonal communication, and anticipating changes in life chances. However, A. Agarwal cautions that an excessive reliance on mass media without coordinated support of formal and informal systems in the community isn't suitable for health promoting behaviour in rural areas.

4. Public Opinion

Public opinion is mediated by the flow of information from mass media. Hence, the mass media plays a crucial role in political dynamics of the country. Media representation of various social and political issues makes citizens aware of their rights, various problems and their solutions.

5. Education through Entertainment

Information about social issues can be embedded in soap operas and movies. For example, movies like Swadesh, Taare Zameen Par and Rang De Basanti sensitize people

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towards certain social issues, while providing wholesome entertainment. In India, the issues in soaps are explicitly prosocial, ranging from local issues (ex. dowry death) to health issues (ex. alcoholism discouraged) to global issues (like environmentalism).

It must be kept in mind that such health messages can backfire because viewers are often not as sophisticated as producers consider them to be. Brown and Cody (1991) had, for instance, studied the effects of the popular series "Hum Log" broadcast during 1980s with the aim of advancing the status of women. Although the program was immensely successful, many female viewers identified more with the traditional matriarchal female character rather than her independent daughters!

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APPENDIX

17. Measurement of Individual Difference

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Measurement of Individual Differences

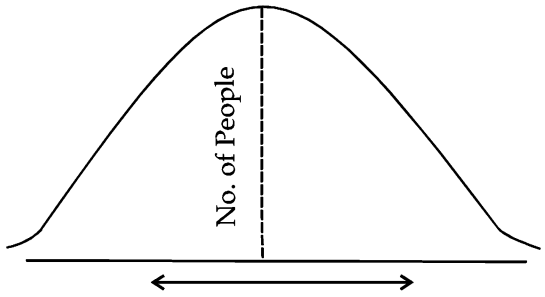
- Nature of Individual Differences
- Characteristics of Psychological tests
- Construction of Psychological tests
- Types of Psychological tests
- Ethical issues in testing

n Nature of Individual Differences

The finger prints of no two individuals is the same. But this is not where individual differences begin, or end. Unlike the individual, an individual has an unique identity. Individuals differ on their beliefs, attitudes, perceptions, thinking, intelligence, aptitude, motivations, emotions etc. In deed, there is a long list of psychological variables about which individuals differ.

The challenge in front of psychologists is to assess these individual differences. To do so, they use psychological tests. Psychological tests try to establish a norm about the general population and assess an individual with respect to the norm. Also, it should be noted that any psychological test measures only one or a limited number of aspects of individual differences. The sum total of individual differences is so vast and wide-spread that it is not possible for a psychological test to measure all these aspects.

Another significant aspect of individual differences is that when measured on a scale, differences of a normal population can be mapped into a graph to look like a **normal distribution.** A normal distribution looks as under :



Individual difference assessed population

In the above normal distribution, we see that a majority of people in the population lie within one standard deviation on both sides of the central line. For example, in an IQ test, the number of people with IQ of 100 (Central Tendency) is maximum. The number of extremely retarded or extremely talented students is equally low.

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n Characteristics of Psychological Tests

A psychological test is a standardized and objective measure of a sample of behaviour (Anastasi, 1954). Psychological tests are just like tests in any other scientific discipline, trying to assess an individual based on observation of a carefully chosen sample of behaviour. In view of this, the principal characteristics of psychological tests are that they:

1. Measure individual differences
2. Are standardized and establish norms
3. Are of average difficulty
4. Are theoretically objective and always aim towards the goal of objectivity.

Standardization

Standardization means that there is an uniformity of procedure in administering and scoring the test. Various conditions in the testing process must be controlled (i.e., standardized) in order to make the scores of different individuals comparable. For instance, suppose a teacher teaches a topic in more detail in one section of a class and in lesser detail in another section, and both sections are given the same academic tests. The scores of the former section will be higher than normal and that of the latter section lower than normal. Owing to this, the scores won't be comparable. The scores won't also be comparable if the two sections have different teachers. This difference in condition holds immense significance in psychological tests because unlike school tests there is a need to be as objective and error-free as possible.

To secure uniform testing conditions, the test constructor has to provide detailed instructions about how to administer each newly developed test. Normally, standardization includes such factors as the *materials employed, time limits, ways of handling queries from test takers, oral instructions to test takers* and any other testing condition that may affect the test results. When you are measuring emotional arousal, for example, the social density (crowds increase arousal) and noise level in the vicinity affect test results. Hence, ideally the surrounding must also be standardized. Lighting, ventilation, freedom from discomfort, distractions are a few factors that can lead to errors in test results.

Norms

The goal of standardization is to enable the test giver to compare the test taker with others. There are no absolute standard in psychology. Hence, psychological tests measure individual's characteristics by comparing it with that of others. Since there is **no absolute scale**, you get a scale when you compare the individual's score with the average performance. The average performance is called the "normal" performance, or the **norm.** If your score deviates from the norm, the *extent of divergence* determines how abnormal your performance is. Hence, in an IQ test 100 is the norm. An IQ of 30 or 170 are abnormal (retarded and gifted respectively).

So how is the norm determined? If 10-year old children normally (i.e. on an average) complete 15 out of 50 problems correctly on a test, the norm is 15. To determine the norm, the test constructor administers the test to a large, representative sample of the type of subjects the test is designed to assess. For example, if a test is constructed to assess the degree of cognitive deprivation in a child from slum backgrounds of urban India, the test constructor administers it to a 'representative sample', which may be children of a few slums of Delhi, Mumbai, Kolkata and some other cities. Then the constructor maps the scores of the sample on a

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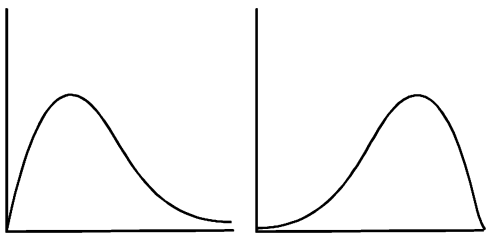
graph to determine the distribution of scores, and the normal score.

Difficulty

Visualize a situation in which the test items on an intelligence test are made too difficult. In such tests, the scores easily reflect the difference between people with IQ 120 and people with IQ 160. But this test can't differentiate between people of IQ 40 and people with IQ 80. This is because, the test items are so difficult that an individual with IQ 80 scores zero; so also an individual with IQ 40. Then can this test be used to assess the general population.

NO! For an engineering entrance exam. (such as IIT JEE), test items can be difficult as such exams are meant to compare the ones with elite engineering acumen and rank them. Whatever the scores of those without the acumen doesn't matter. But a psychological test can't be difficult, because then it won't be able to give accurate diagnosis for those at below normal level. Similarly, a very easy psychological test can't differentiate between two students with abilities much above normal.

A psychological test has to be of roughly average difficulty. The most likely score, obtained by the largest number of subjects, usually corresponds to about 50% correct items. If the test is more or less difficult, the test results are skewed; as under :



Piling at lower end of the scale, implying high difficulty level

Piling at upper end of the scale, implying lower difficulty level

In a test of average difficulty, the results look like a normal distribution.

Objectivity

Psychology is a science. Hence, psychological tests should ideally be objective. It means that the administration, scoring, and interpretation of scores are not affected by subjective judgments of the individual examiner. Further, the test should give the same score every time it is administered, and make objective assessment of the psychological variable in the individual that the test seeks to measure.

Owing to the nature of psychology, absolute objectivity is only theoretically possible. In practice, the aim is to attain as much objectivity as possible. There are three measures used by psychologists to study the extent of objectivity :

1. Reliability of scores
2. Validity of scores
3. Difficulty of the test

Reliability refers to the internal consistency and stability with which a measuring instrument performs its function. In the case of psychological tests, it refers to the *consistency* in test scores when measured again and again. If a test administration at one time gives a score of 90, and when administered at another time it gives a score of 150, it means the test is not reliable. For an individual, 90 and 150 can not both be correct measures. We don't even know if any one of them is the correct measure. In short, the results are so subjective that we can't rely on the test.

Another measure of objectivity is **validity**. An objective test should measure what it is supposed to measure. If a test is designed to measure intelligence and it ends up measuring some other characteristics, then the test is not valid. An objective test should be able to measure what it claims to measure.

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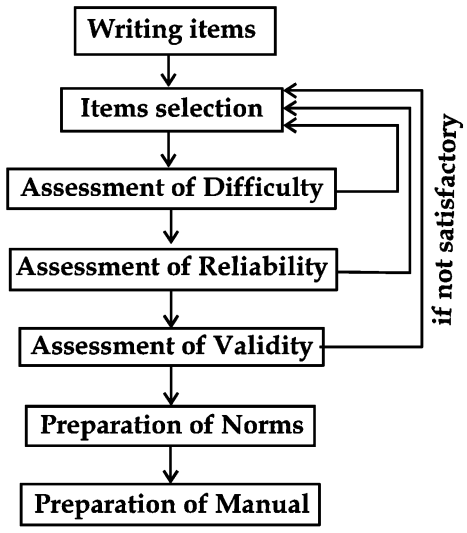
n Construction of Psychological Tests

The process of test construction starts with an exercise in outlining the major objectives of the test. The test constructor decides on what aspects of human psyche she wants to measure, which population the test is intended for etc. In this stage, the test constructor has to make careful planning with regard to the type of instructions to be included, the nature of the test, the medium, the sampling method so as to choose the sample for determining norms etc. Careful planning helps to reduce the efforts necessary to construct the test.

The test construction process now follows the following steps :

1. Writing items of the test
2. Item selection
3. Difficulty measurement
4. Reliability measurement
5. Validity measurement
6. Standardization of preparation of norms
7. Preparation of manual



Writing items of the test

After the test constructor has decided upon the medium of the test (verbal, performance, or audio-visual etc.), the constructor starts writing the test items. Item writing is a creative process, in which the constructor brainstorms and creates items that she believes is relevant to the characteristics being tested. There is no specific guideline the constructor has to follow, but there are certain pre-requisites for writing good and relevant items :

- The constructor must have a thorough knowledge of the subject matter and the target population the test is intended for.
- The constructor must have a large vocabulary.
- The test items must be evaluated by a group of subject expert, and their criticism and suggestions must be taken into consideration when modifying the test.

Item Selection

Not every item generated by the item writer must be incorporated in the test. In deed, how do you prepare a test of items you haven't yet checked on levels of difficulty, reliability and validity. The maximum that can be done at this stage is to make a tentative list of items, arrange them in increasing order of difficulty (difficulty has not yet been measured; difficulty here is the perceived difficulty), and then make preliminary administrations.

In preliminary administration, on a representative sample, the results say which items are more difficult and which are less. For example, if one item is answered by 10 of 20 people in the sample, it is more difficult than another item answered by 16 people. After this, the items are again re-arranged in order of increasing difficulty.

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Assessment of Difficulty

Till now, we have only measured the difficulty of items relative to each other, but not the overall difficulty. Now, the whole test is administered on a representative sample, and results analyzed. If the greatest number of subjects in the sample score 50% of the maximum score, the test is of optimal difficulty. But if the score of maximum number of subjects is less or more than 50%, the difficulty is accordingly less or more. Depending on the type of deviation from normality (average difficulty), easier or more difficult items may be added, or other items may be removed or modified.

Assessment of Reliability

Test items are again modified if the reliability, or validity of the test are not found satisfactory. Reliability of a test is measured by the following methods :

1. Test-Retest method
2. Split half method
3. Equivalent form method

In the **test-retest method**, a single form of the test is administered twice on the sample with a reasonable time gap. The scores obtained at different points of time when correlated give the value of reliability coefficient. This is obviously an easy and simple form of assessment of reliability. However, this form of assessment is prone to many errors. For instance, an examinee giving the tests a second time is better equipped with practice and memory of the first administration of the same test.

In the **split-half method**, a single form of the test is constructed and split into two. The two halves are administered on the same individual and the scores obtained are correlated. The correlation gives the reliability coefficient. When splitting the test, the major aim is to ascertain that the two halves have equivalent difficulty. Hence, most often odd-even method is used i.e., odd numbered items are put in one half and even numbered items in another half. Since the items are arranged in order of increasing difficulty, the two split halves have similar difficulty levels. This method's obvious advantage is that it eliminates the variables affecting retest after a specific period. A single administration of the test on the subject is needed, and the time taken is less.

Yet another choice at the disposal of the test constructor to measure reliability is the **equivalent form method**. In the above two methods, we used a single form of a test, but here we use two forms of the same test. Two equivalent forms are constructed. One form is administered at one point of time and another form after a reasonable time gap. The scores of the two results are correlated to get the reliability coefficient. This method counters some of the prime concerns of earlier methods. It is acknowledged that this is a better method to assess reliability than earlier methods. However, it is a much costly method, given that the test constructor has to make two forms of the test.

Assessment of Validity

The most common way to measure the validity of a test is to compare it with a criterion. This is called **criterion validity**. Suppose that you want to select candidates for the job of shop-floor worker. How do you know the test you have constructed will select the most deserving candidates? Simply you administer the test to criterions – employees who have already done the job of shop-floor worker successfully. Those who have shown their performance become 'criterions' (or criteria) to

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evaluate those whose future performance you wish to predict. If the successful employees score high on the test and unsuccessful employees score low, the test is valid. It has high validity.

But a criterion is not always available. So you go for **construct validity**. In construct validitiy, you check if the test measures what it is supposed to measure as per a theoretical stance. For example, psycho-analytic theory speaks about projection as a defense mechanism. Projective tests like TAT have high construct validity because they seek to follow the theoretical paradigm to evaluate the human characteristics.

Preparation of Norms

The scores obtained by an individual in a test hold no meaning by themselves. They derive their meaning from the comparison of their performance with average performance of the population. The average performance of the population is called norm. To prepare the norms, you don't administer the test on the whole population, but on a *representative sample* of the population. Sampling is a challenge here. Suppose you want to develop a test for male, North India population from Schedule tribe (ST) background. You need to do sampling taking care of the variety of the population in terms of age, sex, tribes and their population, geographical spread etc.

The three commonly used norms are :

1. Age-equivalent norm
2. Grade-equivalent norm
3. Percentage norm

Age-equivalent norm is the average performance of a representative sample of people belonging to an age group. For example, if maximum number of 8-year old children who are administered the test score 15 out of 50, 15 is the age-equivalent norm. Grade-equivalent norm, on the other hand, is the average performance of a representative sample of a certain grade or class.

Percentage norms are in the form of a series of raw scores. For each raw score, the number of subjects who lie below that score, as a percentage of total number of subjects in the representative sample is provided. You must have encountered percentage norms in exams like CAT, MAT and XAT.

Manual Preparation

The psychological tests we are discussing are standardized, objective tests. Hence, the test administration should follow a standardized procedure. So that the subjective judgments of the test administrator don't affect the evaluation process, the constructor should prepare a manual where detailed procedure to administer the test are given. Other details like norms, precautions and interpretation of results should also be incorporated in the manual.

n Types of Psychological Tests

There are a myriad ways in which psychological tests are classified. This is because, such tests vary on a number of aspects. In this section, we will investigate into major classifications of psychological tests.

1. Speed and power test

A pure speed test is one in which individual differences are measured exclusively from the speed of performance. Some major features of speed tests are :

- The items in the test are of uniformly low difficulty level.

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- The time limit is so short that no one could finish all the items.
- Each test taker's score reflects her speed of performance.

On the other hand, a power test is one where the difficulty of items is steeply graded, and there are some items that are too difficult for anyone to solve. Major features of a pure power test are :

- The time limit is long enough to permit every test taker to attempt every question.
- Some items are so difficult that no one can get a perfect score.

Most tests in practice are not pure speed tests or pure power tests. They depend upon both speed and power, in varying proportion.

2. Individual and Group Tests

Individual tests are administered singly to one participant, as in the case of Stanford-Binet test. Group tests, such as the Block test, Otis inventory for screening military personnel etc, permit mass testing. There are some relative advantages of both types of tests. For example, in individual tests :

- the examiner is highly trained, and he can make many valuable auxillary observations regarding the subject.
- better rapport exists between the examiner and the subject. As a result, the examiner can obtain the cooperation of the subject and maintain his interest in the test.
- Individual tests have higher reliability and validity than group tests.
- The subject can easily clarify any doubts he has.

On the other hand,

- Group tests are cheaper.
- In some occasions, individual testing is just not practically possible. For instance, when screening thousands of applicants for recruitment into military, group tests are the only practical option.
- There is more uniformity of procedure in group tests. The subjects can be compared among themselves.

2. Aptitude and Achievement tests :

As per the Oxford dictionary of Psychology (2006), an aptitude test is a test designed to measure an aptitude. Aptitude is the suitability, natural ability, or capacity to learn. In psychology, it means the potential rather than existing capacity to perform some functions after necessary education or training is imparted. An achievement test, on the other hand, is a test of acquired ability or skill. For example, SAT or the Scholastic Achievement Test.

Hence, aptitude tests only predict future performance after some form of training. But achievement tests assess the present level of performance. If you seek to conduct a training (or an educational course) for an engineering skill, for instance, the steps are as follows :

1. Conduct an aptitude test to know who have the aptitude to acquire the skill.
2. Select the ones with aptitude and train them.
3. Assess if they really have acquired the skill using achievement tests.

4. Classification based on testing medium

A distinction is made between paper-and-pencil tests and performance tests based on the medium of test administration. In the paper-and-pencil tests, all items are printed and responses are written by the subject. On the other hand, performance tests require the

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individual to manipulate objects, pictures, or blocks etc. She may have to perform some complex activity.

The advantage of performance tests over paper-and-pencil tests is that performance tests are more culture neutral than paper-and-pencil tests. Paper-and-pencil tests are basically tests that require the individual to be literate, that too in the language in which the tests is administered. Further, language proficiency acts as an extraneous variable, thus affecting the test scores. Another advantage of performance tests is that they can be replicated, with some caution, across cultures. This is not so in the case of paper-and-pencil tests. Often, translated paper-and-pencil tests don't have the desired psychometric properties (such as standardization, validity, reliability etc.)

5. General classification versus differential aptitude

General classifical tests are those that provide a very general description of individual differences. For example, we know that there are many different components in intelligence. Most recent theories have shown that what we call intelligence is actually many different aptitudes Tests like the IQ test try to give a general classification of intelligence. A major drawback of such tests is that they don't reflect upon the differential aptitudes or so to say all dimensions of individual differences the test seeks to measure. On the other hand, tests like the Differential Aptitude Test (DAT) and other such batteries permit differentiation among the individual's special assets and liabilities. Tests of special aptitudes focus on highly specialized areas such as musical, artistic and mechanical aptitudes.

n Ethical considerations in Psychological Testing

Ethics refers to issues or practices (usually with reference to professionals) that are considered morally 'right' and 'fair'. Being professionals who intervene in the affairs of individuals, psychologists also have certain ethical standards. These standards are especially rigorous when the service provided to the client is psychological testing.

Many professional associations have forwarded codes of ethics regarding professional behaviour of psychologists. The American Psychological Association (APA), most popular of the professional organization, sets the following five principles (APA, 2002) of professional behaviour of psychologists :

A. **Beneficence and non-maleficence :** Psychologists should strive to benefit their client, and not to harm them.

B. **Fidelity and Responsibility :** Psychologists should establish relationships of trust, and be aware of their professional and scientific responsibilities to society.

C. **Integrity :** Psychologists should promote accuracy, honesty, and truthfulness in the science, teaching, and practice of psychology.

D. **Justice :** Psychologists should let all persons have access to their services and provide equal quality of service to all the clients. A client who is politically important, or from the same community, for example, should not be given any preferential treatment.

E. **Respect for People's Rights and Dignity :** Psychologists should respect the dignity and worth of all individuals and their right to privacy, confidentiality and self-determination. (referred from McIntere & Miller, 1999)

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Now that we have discussed general ethical guidelines, let us investigate some ethical issues specific to psychological testing.

1. **Test Publisher's Responsibilities**

The test publisher has to follow many guidelines in order not to let the test's psychometric properties be diluted. Also, the test publisher should make all efforts to make all necessary psychometric information available. Some general guidelines for the test publisher are :

- Tests should be sold only to qualified users.
- No tall claims should be made during marketing tests. The publisher needs to be truthful when marketing his product.
- The publisher should ensure **test security,** which means not disclosing the contents of the test. If the content becomes public, it harms the psychometric properties of the test, and invalidates the test for future use.
- The publisher should provide all necessary information to the test user. There should be a test manual that details the procedure for testing, and guides the user in inferring the test scores. The test norms and other data should be provided such that the user doesn't find them confusing.

Test User Responsibility

A test user is anyone who purchases and administers the test and interprets the results of the test. Test taker is the person whose behaviour is being measured. Some major functions of the test user are:

1. He determines the need for psychological testing.
2. He selects the test or tests to use.
3. He administers the test to the test taker.
4. He scores the test.
5. He interprets the test scores (McIntire and Miller, 1999)

Owing to the varied functions that the test user performs, his role is crucial. He has to maintain certain ethical standards, such as :

- He needs to be well qualified to perform the task. Training and experience are factors that affect the test user's skills. There are certain organizations that provide certification for test user.
- He should respect the test taker's rights (which are discussed separately below).
- He shouldn't misuse the information he gets from the assessment process.
- He should explain the test results to the participant in a language that the layman test taker understands.

Test Taker's Rights

There are certain rights that individuals taking the test possess. The test publisher, test user, and any other professional involved should respect and uphold these rights. A few fundamental right of the test taker are :

1. **Right to Privacy** : All the information that the client discloses should be kept private and not be disclosed without her explicit permission. This aspect of the psychologist's duty is called *confidentiality*. Another related concept is *anonymity*. Sometimes the test taker doesn't want to reveal his/her identity to the test user. The test user needs to understand and respect the test taker's need for anonymity.
2. **Right to informed consent** : The test taker has the right to self-determination. He is entitled to full explanations of why he is being tested, how the test data will be used, and what test scores mean. Sometimes, researchers conduct tests as part of surveys

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to understand prevalence of some behaviour in a population. So that their research is not influenced by the test taker's expectations, they are tempted not to provide full information about the test. But this is unethical.

3. The test taker has a **right to know and understand results.** He is entitled to a nontechnical explanation of test scores.

Testing Special Populations

Special provisions must be made when testing special populations, such as minority ethnic groups, students with learning disabilities, people with mental retardation etc. For instance, the tribal groups of India have very different cultures from that of mainstream groups. If the tests designed for mainstream groups are administered to them, the results are inaccurate. Hence, the testing itself is unethical. Similarly, special provisions should be made to test people with learning disabilities, given that they have problems in reading test items. Physically and mentally challenged individuals need to be administered special tests that overcome their disabilities to measure the intended skills.

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About the Author

Smarak Swain graduated in 2006 from the department of electrical engineering, IIT Kharagpur. He appeared in the Union Public Service Commission (UPSC) conducted Civil Service examination, with Mathematics (preliminary), and Sociology and Psychology (mains) as optionals, in 2007. He secured an all India rank of 196 in his very first attempt. Presently he is in Indian Revenue Service (IRS) and is undergoing training as Assistant Commissioner of Income Tax at National Academy of Direct Taxes (NADT), Nagpur. He has a deep interest in reading, writing, blogging, and travelling. He is presently pursuing MA in Sociology from IGNOU and Masters in Taxation and Business Laws from NALSAR Law University, Hyderabad. He can be reached at smarak@gmail.com

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